

Design

Council of Industrial Design

146

February 1961

Price 3s



Fascia sign made by Haskins, St. John Street, London, E.C.1, for the London Electricity Board. The fascia is edge lit, and consists of clear 'Perspex' acrylic sheet engraved on the back, and mounted against black 'Perspex'.



**Signs made
from 'Perspex'
stand out**

This strikingly simple fascia sign, the first of its kind in this country, shows the scope 'Perspex' acrylic sheet offers for eyecatching and imaginative design. It was made by Haskins for the London Electricity Board. The lettering is engraved on the back of clear 'Perspex' sheet, which is itself mounted against black 'Perspex'. The whole fascia panel is edge lit so as to illuminate all the engraved surfaces. In addition to being suitable for engraving and inlaying, 'Perspex' can be easily shaped into virtually any letter form. It is made in a very wide range of colours, and takes printing perfectly; its smooth but very durable surface is easy to maintain and will stand indefinite exposure to the weather. To combine eyecatching design with durability, specify signs made from 'Perspex'.

'PERSPEX'

*'Perspex' is the registered trade mark
for the acrylic sheet manufactured by I.C.I.*



IMPERIAL CHEMICAL INDUSTRIES LIMITED • LONDON • S.W.1
PB85



The foundation of your decor . . . the instant appeal of colour and style . . . the atmosphere of space created by the right design . . . that begins with a carpet, with its warm glow of colour and attractive pattern . . . the feeling of luxury . . . a carpet like SHILDON Bri-Nylon, the most advanced, most exciting carpet development of recent years. And with a much longer life than any other known carpet, yet so reasonable in cost because of its own foam-rubber underlay.

*See the superb range of
Shildon Carpets and Rugs at
the SHILDON Bri-Nylon
Carpet Centre
60 Berners Street, London W1
Tel: LANgham 0471*

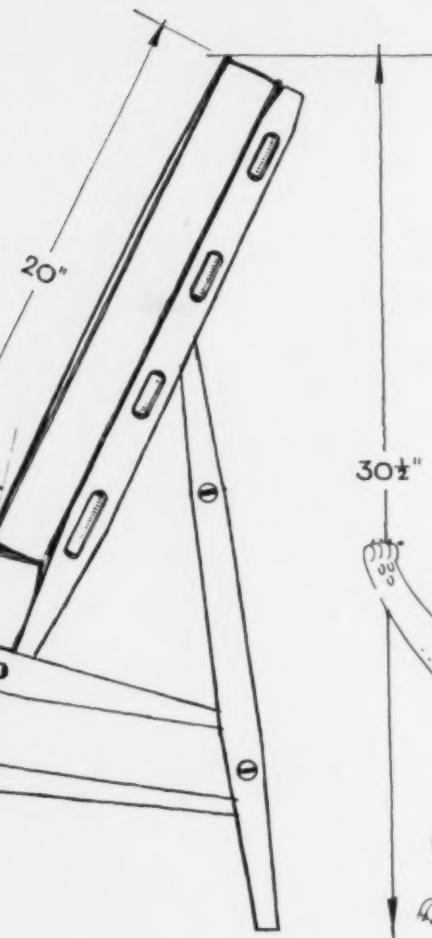
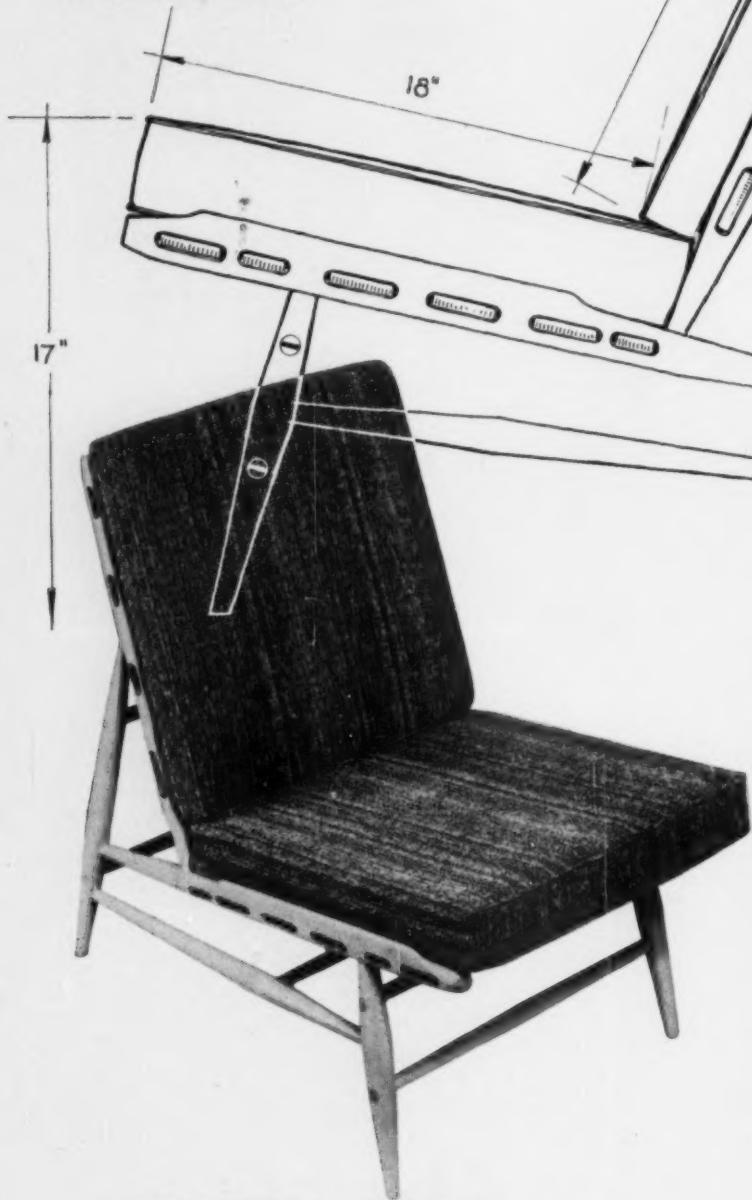
Shildon BRI-NYLON CARPET

DETAIL SHOWING
WEBBING FIXING
PAT. No. 800.828



Here's how the ERCOLion secures extra comfort. The patented method of anchoring the resilient rubber webbing to the frame allows deep shock-absorbing action that is exclusive to Ercol.

- No. 427 EASY CHAIR PAT. APPD. 35840/58
- DESIGN APPLNS 891887/8



The ERCOLion on the anatomy of comfort

"Design for the comfort of the anatomy" began the ERCOLION, "is an amalgam of science and aesthetics. A marriage of form and information. A means of support without obtrusive supporting means. Take my new light but immensely strong Easy Chair. The entire sitting area of the seat and back is completely free of any cross rails. Just resilient rubber webbing (self anchored to the solid Beech frame), supporting deep foam cushions. A hammock-like haven which 'gives' to your body at every point. However you dispose your anatomy you are superbly comfortable as never before, because you are literally 'free-floating'. And as an additional practical comfort", concluded the ERCOLION, "I have provided zip-off cushion covers".

ERCOL Windsor
contemporary furniture

ERCOL FURNITURE LTD · HIGH WYCOMBE · BUCKS

PIRELLI Resilient webbing

A flat, flexible spring of bonded rubber and fabric. Immeasurably strong, untiringly resilient. Keynote: versatility.

Fit the appropriate metal clip, and attach to almost any object; the applications of this springing medium are infinite.

Now being used in nearly all contemporary furniture, in car and aircraft seating.

Progressive designers with springing problems on their minds should write to: Pirelli Ltd, 343-345 Euston Road, London NW1 Telephone Euston 3131



in one working day!

Modernisation of a bar, restaurant, shop or office *all in one day*? And without disturbing staff or customers? That's what can be achieved by using HARDEC—*quickest fixing plastic surface*. The reason is this: HARDEC is a *balanced* board which lies flat by itself, needing only the simplest fixing.

In 'Operation HARDEC', the area to be re-surfaced is measured-up and the boards pre-cut to size beforehand. Then colourful, plastic-surfaced HARDEC tops can be quickly and permanently fixed on horizontal surfaces with the minimum of adhesive or by simple metal edging.

Wall-panelling with HARDEC (in another of its many designs) takes only a little longer. A simple framework of timber grounds... contact adhesive (panel-pins or screws, if you prefer) and the job is done.

THAT'S THE TIME, LABOUR AND MONEY YOU SAVE WITH

Hardec

Quickest-Fixing Horizontal or Vertical Plastic Surface

Write for free sample to:—

THE AIRSCREW COMPANY & JICWOOD LTD • DEPT DN18 • WEYBRIDGE • SURREY

ARTISTS MATERIALS



W
N

WINSOR & NEWTON



WINSOR & NEWTON LTD LONDON NEW YORK SYDNEY

FIESTA

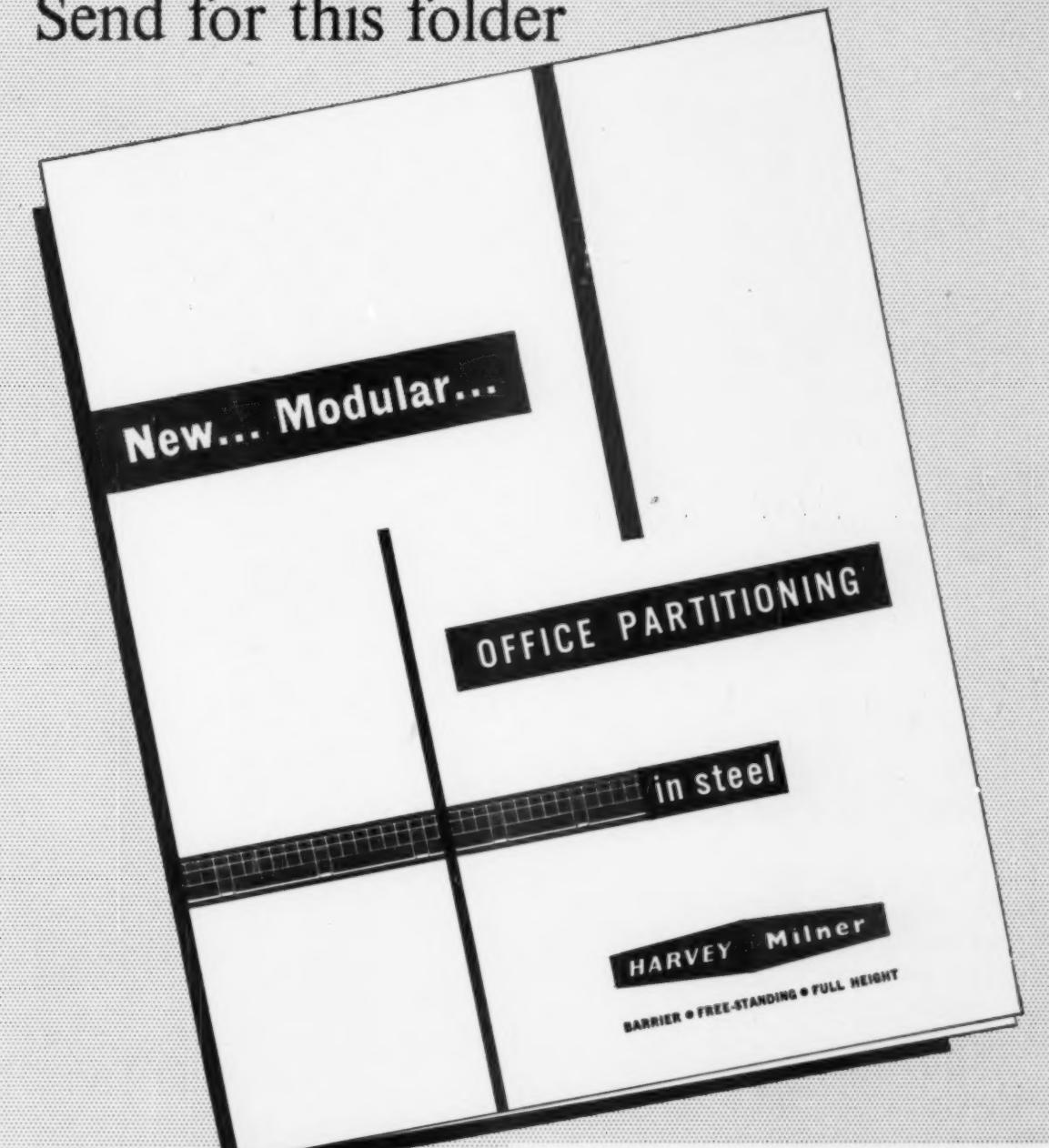
melamine

one of the
1960
design
centre
awards

Product design
by Ronald E. Brookes FSIID

BROOKES & ADAMS LTD. BIRMINGHAM 1

Send for this folder



The knowledge and experience of two leading makers have been pooled to produce Harvey-Milner Partitioning, and in the process of redesigning, important additional features have been introduced.

RE-ARRANGEMENT of panels and doors can be effected without dismantling a whole partition.

INCREASED DOOR WIDTH allows for the movement of large units of furniture.

CONCEALED WIRING is instantly accessible.

DOOR CLEARANCE over carpets by simple adjustment of kick-plate-base.

SOUND AND HEAT INSULATION incorporated in panels and doors. MODULAR DESIGN facilitates planning. Send for List 1078.

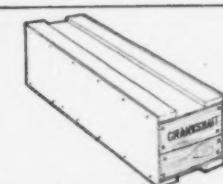
G. A. HARVEY & CO. (LONDON) LTD., WOOLWICH ROAD, LONDON, S.E.7. Telephone: GREenwich 3232 (22 lines) SF48

THE BOARD WE CAN TAILOR TO SUIT YOU EXACTLY

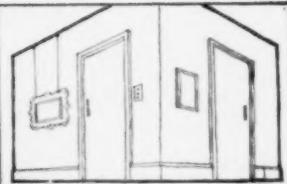
As well as being bent, blanked, and cut to almost any size, Bowater Board can be dressed up in all sorts of attractive colours and textures. For reasonably long runs, it can be given special hardening, softening, or other treatments to make it suitable for jobs like the ones shown here...



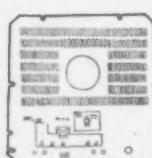
For British Railways carriage partitions, Bowater Board was specially treated for easier lamination of Melamine.



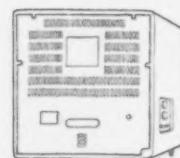
A specially softened board was produced for these crankshaft boxes, so that automatic nailing machines could be used.



By contrast, a specially stiffened Bowater Board was used for making these flush doors.



Another regular use—TV backs. Bowater Board is dark-stained so that overprinted circuit diagrams are clearly legible.



TV backs again: this time, Bowater Board was fine-meshed on the reverse side so it could take screening foil.



Another British Railways assignment: Bowater Board was specially adapted to make it easier to curve and shape railway coach ceilings.



Like a booklet and some samples to start you thinking? Write to:

Imagine how you can use
Bowater Board 

BUILDING BOARDS DIVISION, BOWATERS SALES COMPANY LIMITED,
BOWATER HOUSE, KNIGHTSBRIDGE, LONDON SW1. TEL: KNI 7070
CRG 6481



1



2



3



4



5



6



7



CINTIQUE
CHAIRS
GIVE YOU
•EXCEPTIONAL
COMFORT

Design by Ward & Austin: Model No. E 82

AND GOOD DESIGN

AND RELIABILITY

AND AT REASONABLE PRICES

1 Roomy, luxurious, head-resting armchair: Model No. 728-15

2 Back and seat instantly removable for cleaning or recovering: patented: No. F 74

3 Aluminium-legged and with zip-fastened covers: the 'Italian' chair: Model No. 685-19

4 Unit chairs for use singly or banked in twos or threes settee-wise: Model No. U 22

5 Chairs with Cintique's patented springing, known in four continents for exceptional comfort: Model No. E 20

6 One of the Firmback group of chairs: rugged construction but elegant: Model No. F 70

7 Various settees, in different sizes, team-up with Cintique chairs: this one is Model No. T 102

*... and there are many other Cintique models including:
stacking chairs/ chairs with removable
zip-fastened covers/ sectional seating with or
without corner units*

Cintique
CHAIRS

sold by good house furnishers
and contract furnishers

made by Cintique Chair Co,
Andrews Road, London E8
(Clissold 1262)

brochures and prices gladly sent
on request: please mention
DESIGN

Stainless Steel . . .



. . . by design

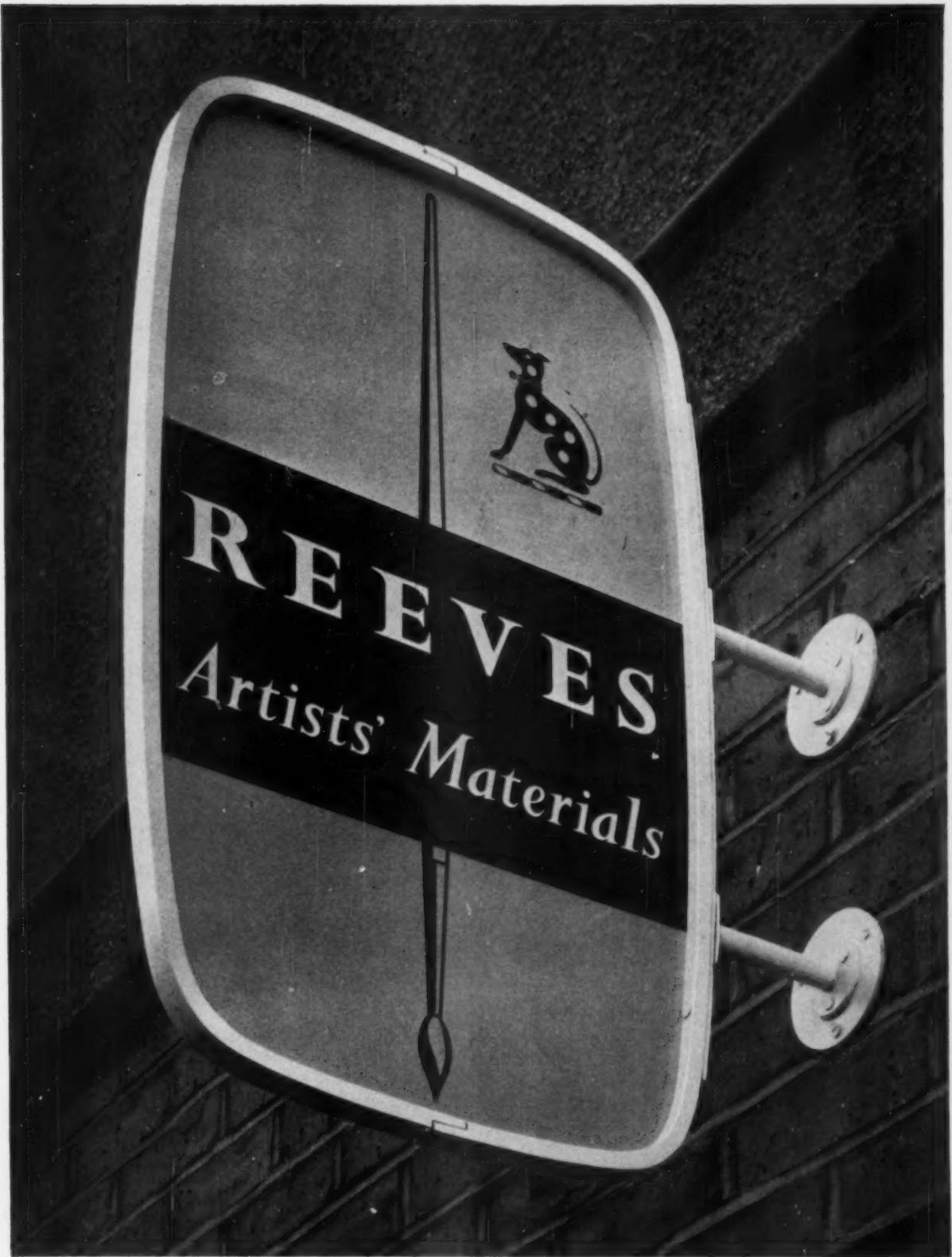
Designed by Eric Clements, the Bramah Cream Jug and Sugar Basin have now been added to the range of tableware produced by J. R. Bramah Limited (Stainless Steel Tableware Division) Sheffield.

It is a striking example of the application of the most modern fabricating techniques to stainless steel and of the close technical collaboration between steel manufacturer, designer and fabricator.



FIRTH-VICKERS STAINLESS STEELS LTD., SHEFFIELD

— the only company in Europe to devote its activities exclusively to the production and development of stainless and heat-resisting steels.



Which
laminate
will give
me more
creative
scope?



FABLONITE

THE LIFETIME LAMINATE

FABLONITE is the new *top-quality* laminate that introduces over 70 new and exclusive stylings. There are 13 exceptionally realistic wood grains (their unique long 'repeats' defy detection!) . . . 18 pure plain colours . . . hosts of colourful patterns. The glorious 'Harmony' stylings (combining two or more effects in one distinctive panel) give individuality to built-ins and make interesting focal points. FABLONITE *costs less to use* — list price is only 3/9 per square foot in the standard range (including wood grains). *Planned nationwide distribution* ensures that you get the FABLONITE you want, *where and when you want it*. No costly hold-ups . . . no last-minute changes of plan!

The Fablon Building Division is ready to assist you with technical information. For details of prices, stylings and specifications, post the coupon today, to FABLON LTD., 49 PARK LANE, LONDON, W.1.

Fabulous New **Fablone**

To: FABLON LIMITED · 49 Park Lane · London W1

Please supply details of FABLONITE prices, stylings and specifications.

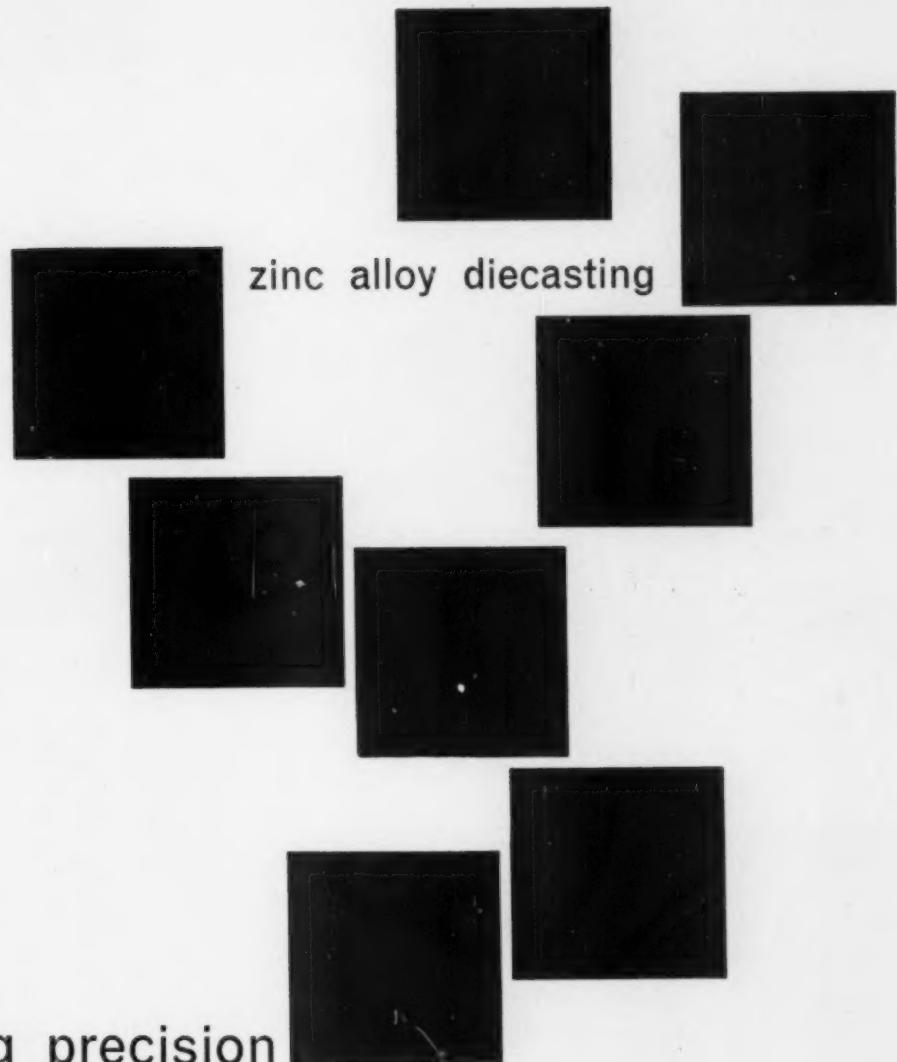
Please arrange for a FABLONITE consultant to call by appointment.
(TICK WHERE APPLICABLE)

NAME.....

ADDRESS.....



D.2



zinc alloy diecasting

repeating precision

If it's a question of precision—precision in zinc alloy diecast components—then call in Joseph Fray Limited. We are proud of our reputation for quality and have a large capacity producing castings precisely to your design and specification. We can also polish, plate and finish machine if required. Another source of pride are our technical representatives who can call, at your request, and discuss your requirements, or advise on your problems, on the spot. Joseph Fray offer first-class service with a first-class result every time.



We specialise also in styling and ornamentation in an infinite variety of materials, colours and finishes. Manufacturers of vitreous enamel nameplates and badges. Suppliers to the leading manufacturers in the automobile, commercial vehicle, domestic appliance and many other industries.

JOSEPH FRAY LIMITED
36 Albion Street, Birmingham 1
Telephone: CENTRAL 4114 (p.b.x.)
Telegrams: FRAY, BIRMINGHAM

"Twitterton!"

Is this really

FORMICA^{*}?"



FORMICA **make**

INDUSTRIAL LAMINATES
DECORATIVE LAMINATES
CHAIR SETS
EXTRUDED PLASTICS

For full information on any FORMICA product, please write to:

FORMICA LIMITED, De La Rue House, 84-86 Regent Street, London, W.1 Tel: REGent 8020

** FORMICA is a registered trade mark*

The ceiling that lights



A Lumenated Module installation in the showroom of Middlesex Motors, Stanmore. ARCHITECTS: Tubbs, Duncan & Osborn, A.R.I.B.A.

Lumenated Ceilings are precision made. They arrive on site ready for immediate erection — using a minimum of skilled labour. They are covered by a comprehensive guarantee and a full maintenance service is provided. Expert co-operation on design and installation can be given by our experienced staff. Most Lumenated Ceilings diffuser designs have been accepted by the Council of Industrial Design. Please write for full details.

LUMENATED CEILINGS LTD

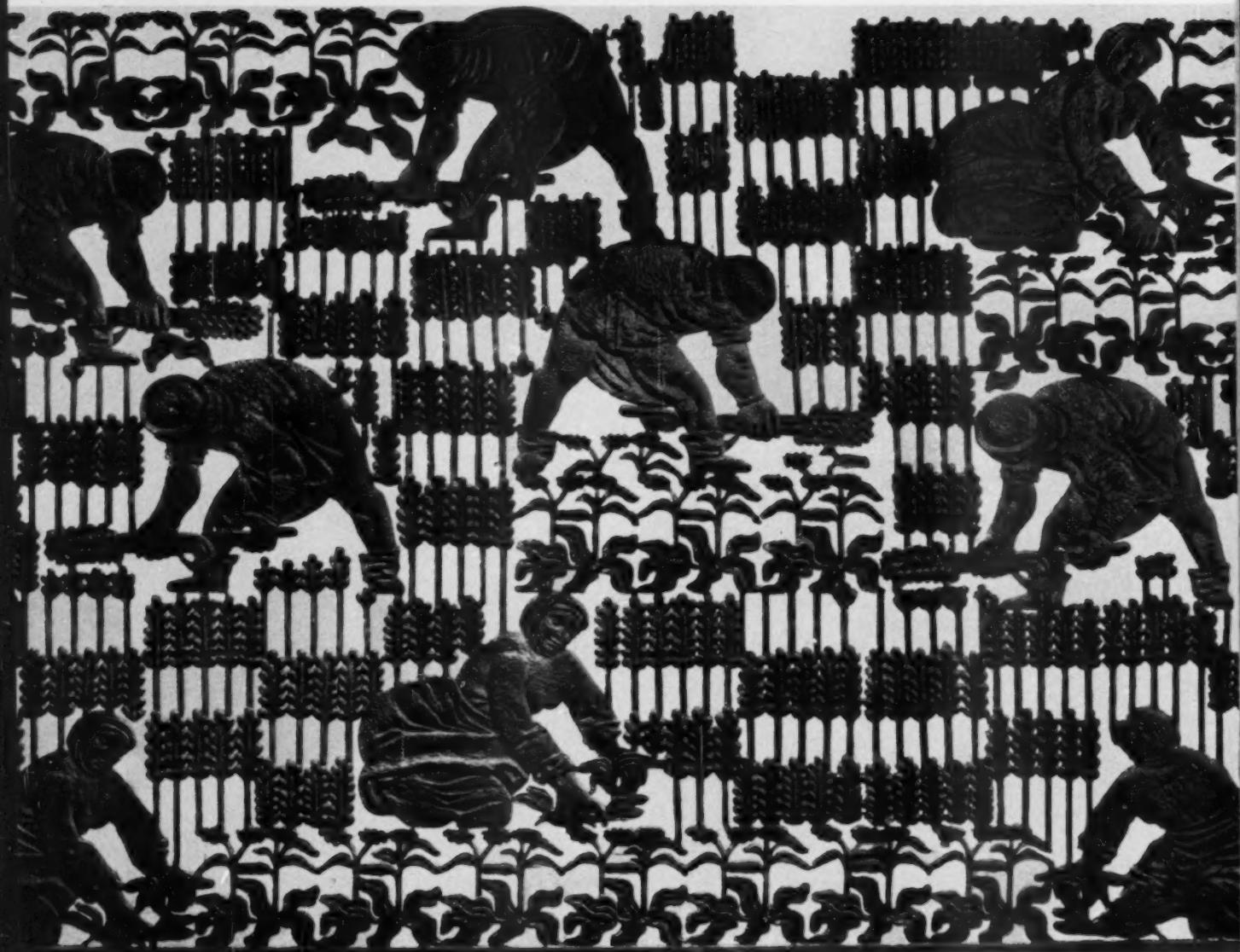
A member of the Hall-Thermotank Group.

ALLIANCE HOUSE, CAXTON STREET, LONDON SW1. TELEPHONE ABBEY 7113

TGA 185

Sculpture by the yard . . .

FROM A DOORHANDLE TO A MONUMENT*



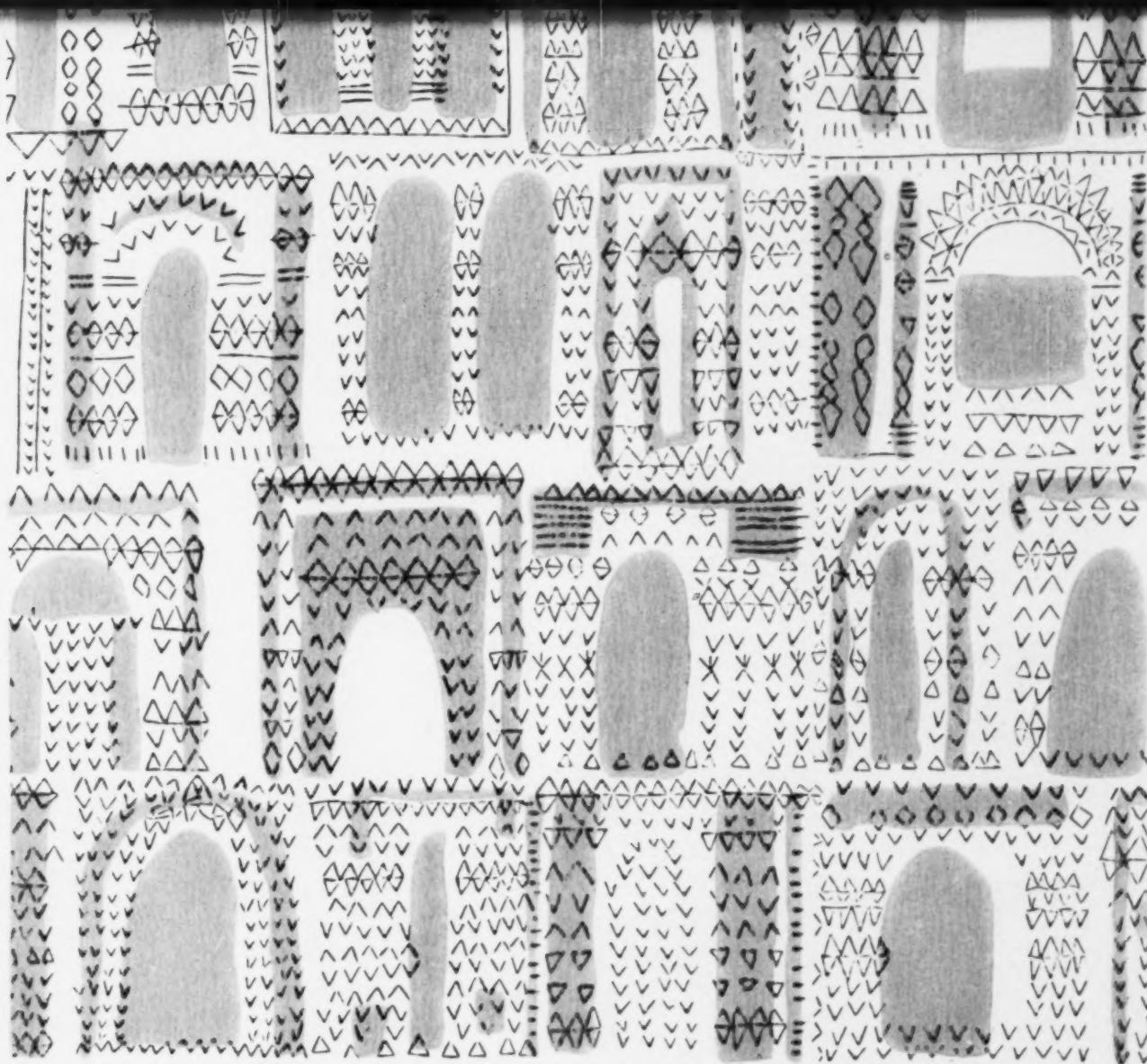
Aluminium Bronze screen commissioned for Red Rose Restaurant at Lewis's Liverpool by Misha Black, O.B.E., R.D.I., P.P.S.I.A. of Design Research Unit, architect



MITZI CUNLIFFE *sculptor for architecture*

18 CRANMER ROAD, DIDSBURY, MANCHESTER 20 telephone Didsbury 5106

* prices on request



"Portal" designed by Terence Conran. M1059 shown to scale.

A new collection of machine printed wallpapers has just been compiled by the London Office of The Wall Paper Manufacturers Limited 19/21 Mortimer Street, W.1.
and is now available through wallpaper suppliers. Many prominent designers are associated with this collection among them Lucienne Day, Jacqueline Groag, Terence Conran, Joyce Storey and William Gear.

Modus wallpapers, because machine printed, are moderate in price,
and in order to increase their usefulness to Architects and Interior Designers

all these papers have been treated with a special protective coating.

YOU ARE INVITED TO VISIT THE EXHIBITION OF THESE WALLPAPERS AT
MORTIMER STREET (FIRST FLOOR)



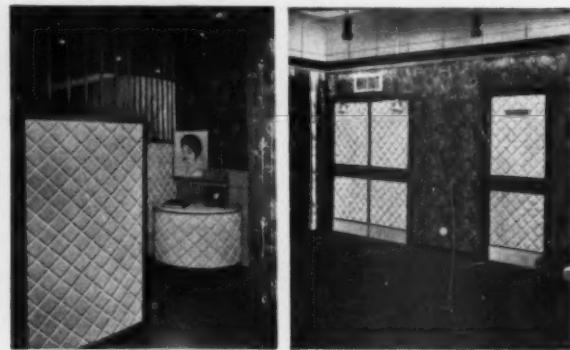
MODUS

1921 MORTIMER STREET LONDON W1

Everywhere
striking new decorative
effects are being created with

Paniquil

padded and quilted p.v.c. on hardboard



Reception area, Gina hair stylists,
London, SW

The foyer, State Ballroom, Kilburn
(By courtesy of C.M.A. Ltd.)



Hairstyling Salons, Harrods Ltd of Knightsbridge.

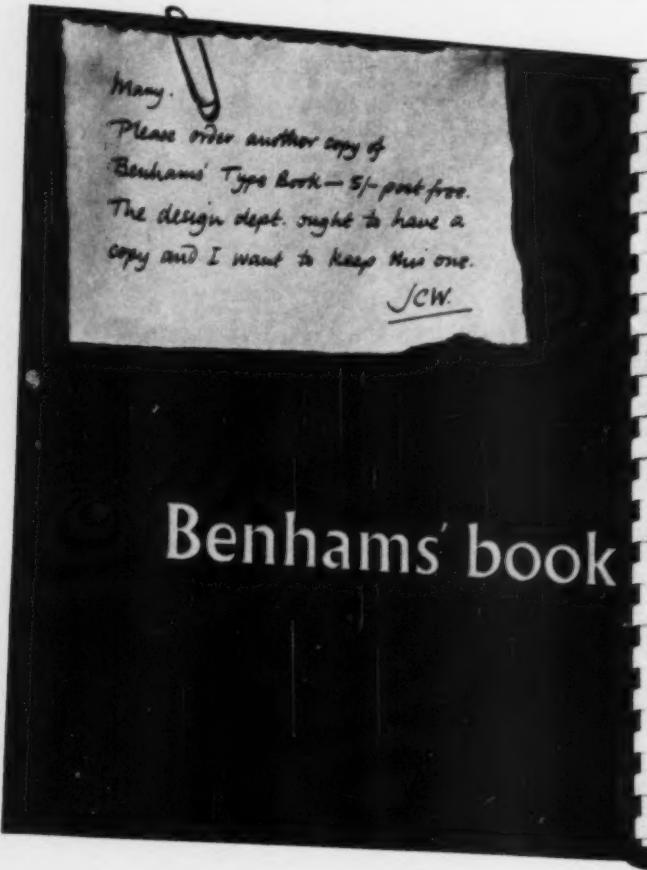
All the elegance and luxurious softness of quilting is offered at *low cost* by this remarkable material. In shops, stores, hotels, restaurants, cinemas, theatres, offices and houses all over the country, its use has led to the creation of the most striking and pleasing decorative effects. A few examples of 'Paniquil' *in situ* are shown here, but you must see 'Paniquil' for yourself to appreciate its possibilities to the full. Send now for samples and details.

- ★ New luxury at reasonable cost
- ★ Wide range of colours and designs
- ★ Simple to install ★ Easy to keep clean

PANIQUIL (SALES) LTD

40 New Cavendish Street, London W1. Tel: WELbeck 0846

Stockists throughout  the United Kingdom

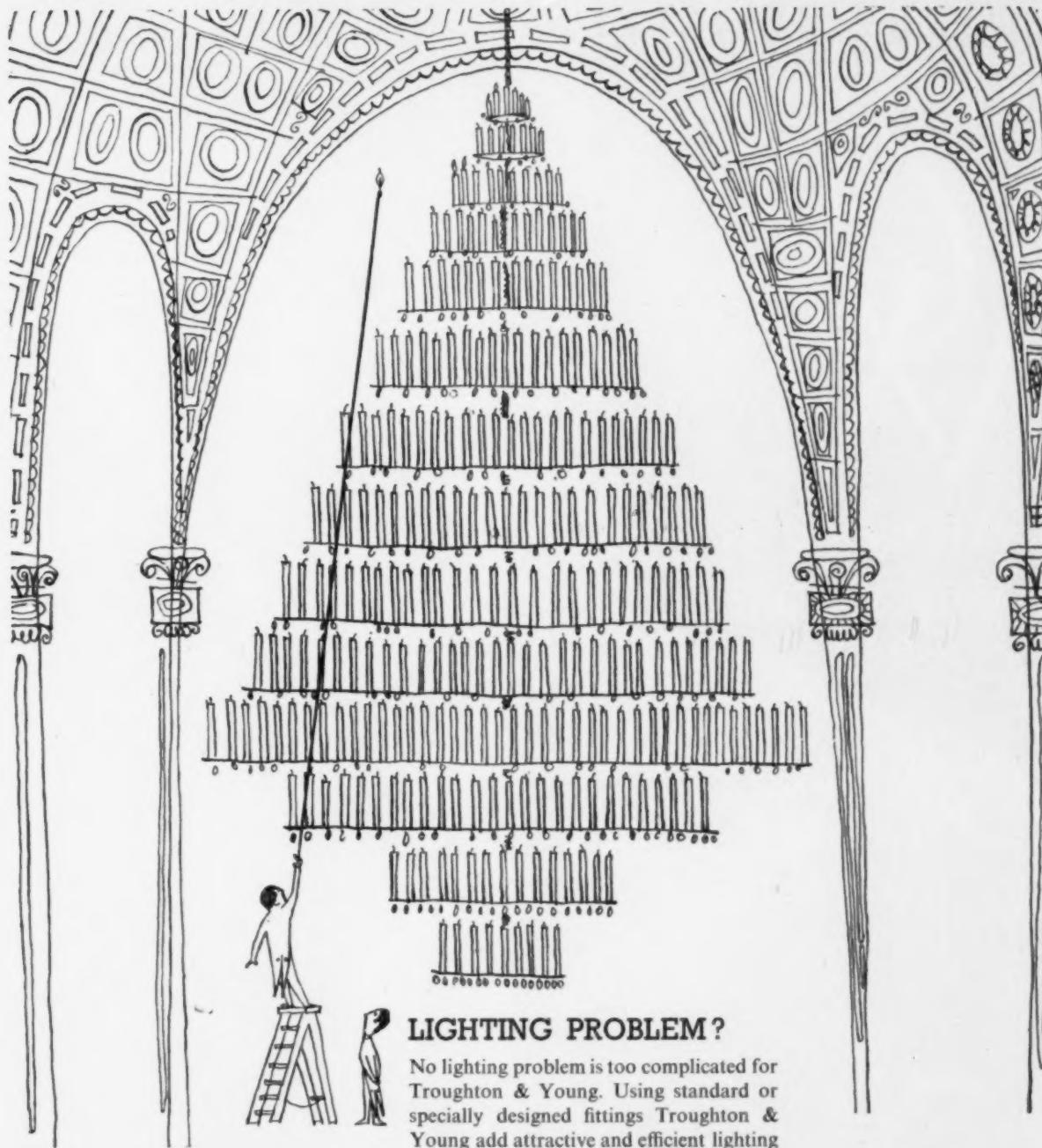


Many.
Please order another copy of
Benhams' Type Book—5/- post free.
The design dept. ought to have a
copy and I want to keep this one.
J.C.W.

House style of composition, page 5
Planning a job: copy preparation, paper & format, page 11
Type for text composition, page 21
Display types, page 29
Type ornaments and rules, page 33
A selection of printed specimens, page 39

Benhams' book of printing types

BENHAM AND COMPANY LIMITED
12 Culver Street, Colchester. Telephone 6263
Coffield's Inn, Foster Lane, Fleet Street, E.C.4 - Chancery 6136



LIGHTING PROBLEM?

No lighting problem is too complicated for Troughton & Young. Using standard or specially designed fittings Troughton & Young add attractive and efficient lighting to any interior decoration as can be seen in the illustration below.

Why not discuss *your* problem with

TROUGHTON & YOUNG

TROUGHTON & YOUNG (Lighting) LTD.,
The Lighting Centre, 143 Knightsbridge, London, S.W.1.
Tel: KENsington 3444

And at Rodney Street, Liverpool 1.

Kingdom Hall, International Bible Students Association.
 Architect: Keith P. Roberts of St. Albans, LRIBA.



EDINBURGH
WEAVERS



102 MOUNT ST
LONDON W1

<< PHEASANT MOON >>
DESIGNED BY
HANS TISDALL

Design

EDITOR	<i>John E. Blake</i>
EDITORIAL ADVISERS	<i>Paul Reilly</i> <i>J. Noel White</i> <i>Michael Farr</i>
ART EDITOR	<i>Kenneth Garland</i>
ASSISTANT EDITOR	<i>Malcolm J. Brookes</i>
NEWS EDITOR	<i>Gillian Naylor</i>
EDITORIAL ASSISTANT	<i>Dennis Cheetham</i>
PRODUCTION	<i>Malcolm Cole</i>
STAFF PHOTOGRAPHER	<i>Alfred Lammer</i>
BUSINESS MANAGER	<i>Arthur Sudbery</i>
	Overseas correspondents
AUSTRALIA	<i>Keith Newman</i>
AUSTRIA	<i>Bettina Hirsch</i>
BELGIUM	<i>Josine des Cressonnières</i>
CANADA	<i>John Kettle</i>
DENMARK	<i>Ibi Trier Mørch</i>
FINLAND	<i>Olof Gummerus</i>
FRANCE	<i>Roger Cario</i>
GERMANY	<i>Heinrich König</i>
HOLLAND	<i>Nico Verhoeven</i>
ITALY	<i>Letizia Frajlich Ponti</i>
JAPAN	<i>Hisao Yamamoto</i>
NEW ZEALAND	<i>Roger Lascelles</i>
NORWAY	<i>Ferdinand Aars</i>
SOUTH AFRICA	<i>Charles Winckley</i>
SWEDEN	<i>Eva Rolf</i>
SWITZERLAND	<i>Alfred Altherr</i>
USA	<i>Lazette Van Houten</i>

23 Good offices

25 Pointers

26 Television and radio receivers *G. E. Moggridge*

This first of a new series of articles on the way products are developed discusses a range of television and radio sets with a distinctive house style. The staff designer responsible was given a free hand and the full backing of management - a practice that might benefit other industries

32 Street furniture exhibition *Michael Middleton*

The author reviews the CoID's new permanent exhibition on the South Bank

34 Planning the practice *B. Shackel*

The article shows how a well designed work space layout can speed, simplify and ease the task of highly skilled professional teams and suggests that such an approach would help many other types of specialised group

40 Review of current design

44 TV settings *Roger Coleman*

In the third of this series on television design, the author isolates an episode in a drama production to show how a setting designer works

52 Overseas review

Planning schools for the future *J. Christopher Jones*

A report by Dave Chapman Inc on the use of television in American schools may mark a new era for industrial designers.

Direction: A miscellany of products and ideas from abroad

61 Face value *Edgar Levy*

The author detects signs of improvement in the design of British colonial stamps

63 Miscellany

65 Quotes

67 Reports

69 News 71 Letters 73 Books

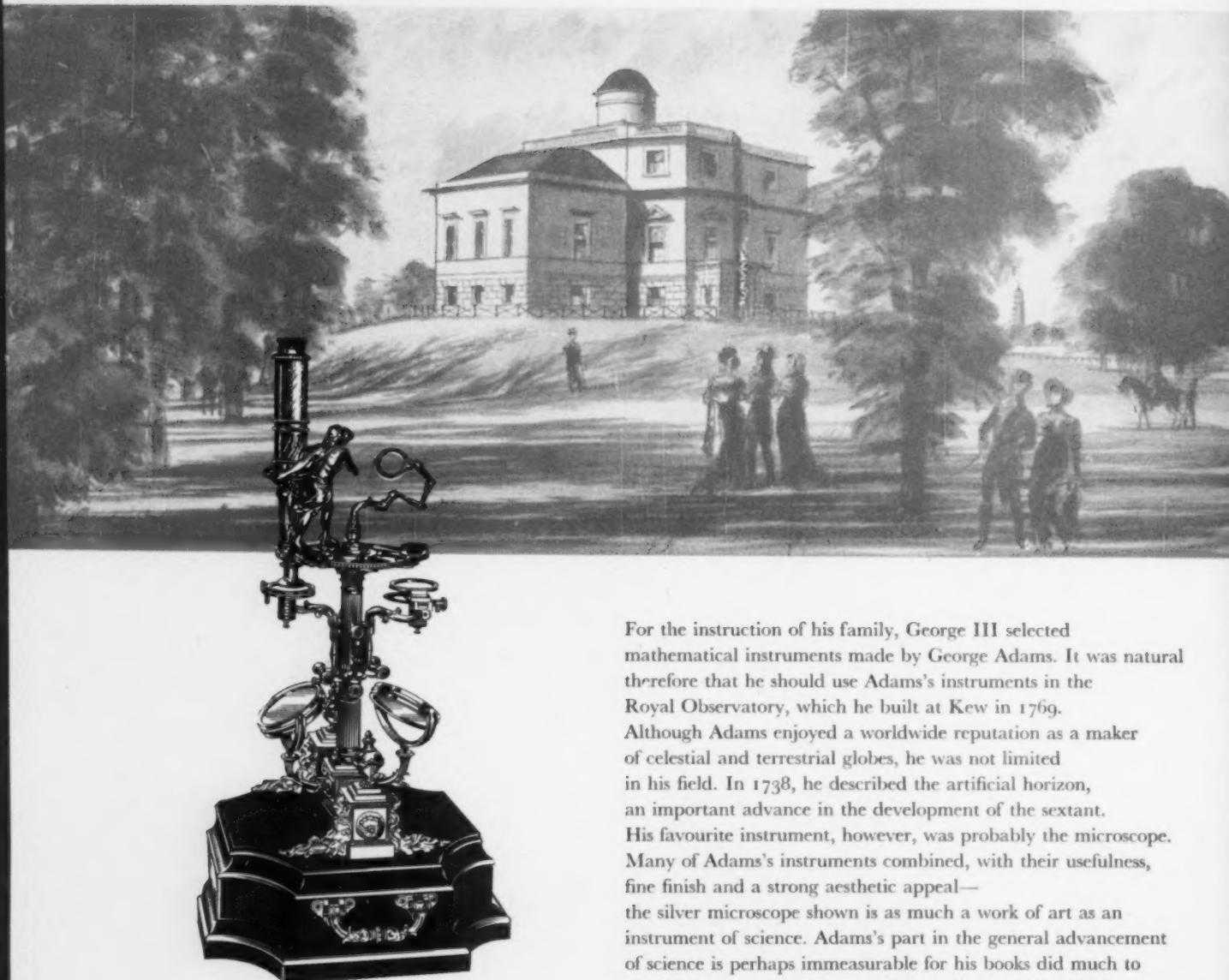
The addresses of British manufacturers in this issue are on page 75

Editorial Circulation Advertisements Council of Industrial Design, The Design Centre, 28 Haymarket, London sw1 Tel: TRAFALGAR 8000 and the Council of Industrial Design Scottish Committee, Scottish Design Centre, 46 West George Street, Glasgow c2 Tel: nouglas 3914

Design may be obtained from booksellers at home and abroad or from the addresses above. Yearly subscription rate: UK 40s post paid

No. 14 Instrument Maker

George Adams (1704-1773) was perhaps the greatest of the English scientific instrument makers of the 18th Century. Apprenticed in 1718, he set up his own business in 1735, at the 'Sign of Tycho Brahe's Head' in Fleet Street.



For the instruction of his family, George III selected mathematical instruments made by George Adams. It was natural therefore that he should use Adams's instruments in the Royal Observatory, which he built at Kew in 1769. Although Adams enjoyed a worldwide reputation as a maker of celestial and terrestrial globes, he was not limited in his field. In 1738, he described the artificial horizon, an important advance in the development of the sextant. His favourite instrument, however, was probably the microscope. Many of Adams's instruments combined, with their usefulness, fine finish and a strong aesthetic appeal—the silver microscope shown is as much a work of art as an instrument of science. Adams's part in the general advancement of science is perhaps immeasurable for his books did much to popularise science and its teaching outside the Universities.

In I.C.I., creative minds are constantly searching for new products and processes and for improvements to existing ones.



GOOD OFFICES

The ischial regions suffer more than they should, especially those that make up the anatomy of office workers. DESIGN's new-found word is for the muscles on the underside of the thigh which frequently get a lot of unnecessary pressure put upon them by chairs that are too high. A refinement of this common complaint was discovered recently in the *apparently* very well designed offices of a large organization. The offices are ingeniously laid out and their appearance is engaging; the only trouble is that most of those who work there are going to be uncomfortable because of the deep horizontal edge to the desk tops. We especially noted the typists with their thighs jammed between this member and the top of the seat. The aesthetic unity which this edge gives to the rows of desks is striking – at the expense of human comfort.

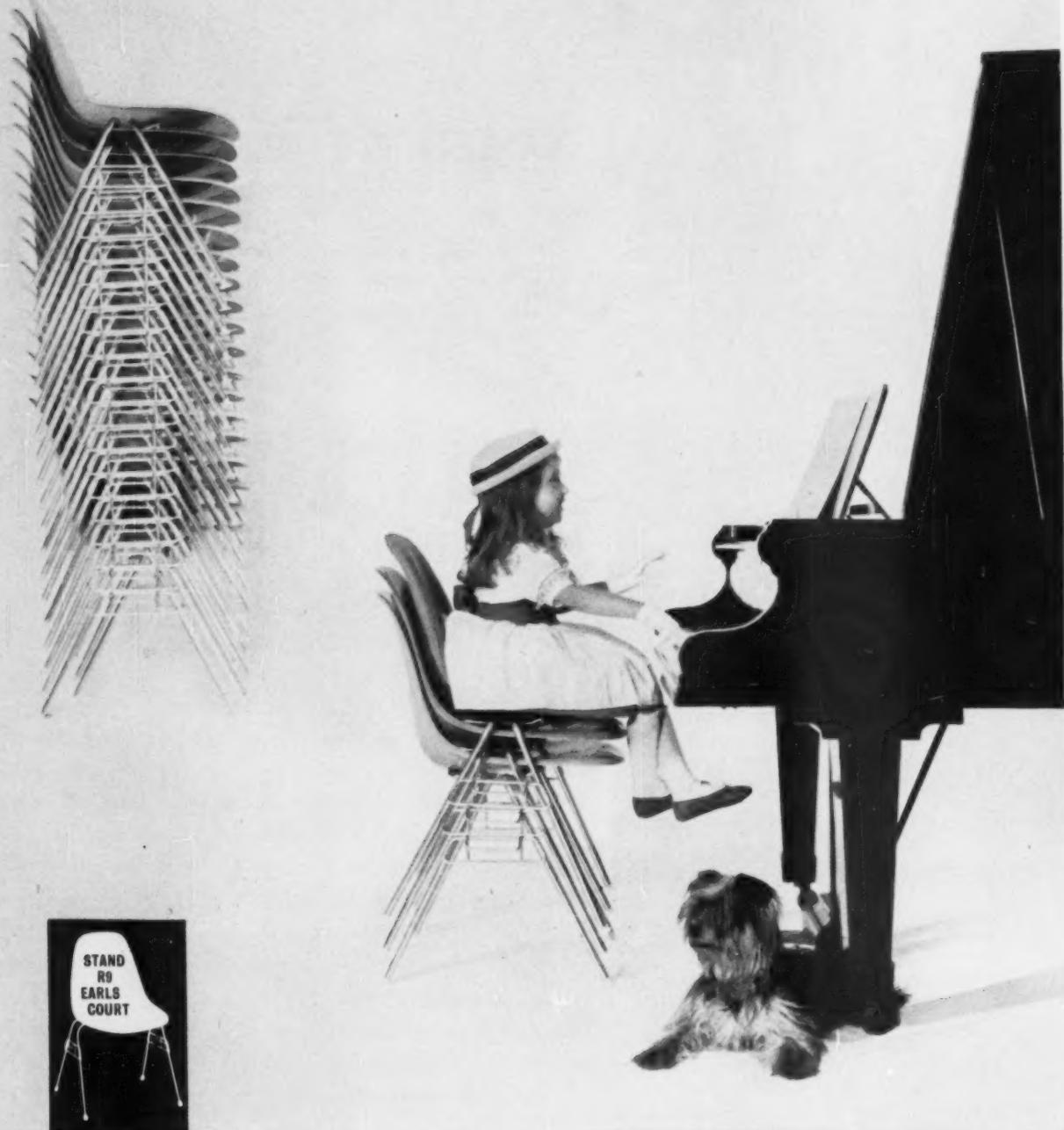
Management could avoid such problems, but it has lacked a readily available guide. The Institute of Directors is now to supply one. Taking its cue from the *Offices Act 1960* and realizing that the Government would soon be constructing a legislative framework in which to operate it, the institute decided to initiate an investigation into environmental conditions in offices. A committee was formed under the chairmanship of Peter Trench in April of last year; its report, *Better Offices*,* is to be published this month and all 36,000 members of the institute will get a copy. It will be reviewed later in DESIGN.

All through the report the human factor has been kept uppermost – it is indeed *the* common factor, relatively, whatever the size and importance of the office. Tenants of multi-storey blocks as well as the ageing businessman in two back rooms can equally benefit from what Mr Trench and his committee have to tell them. A central chapter on furniture and fittings explains the advantages of the anthropometrical outlook in plain man's language and reviews the few designs on the market that come up to scratch.

But if the human factor is stressed the report leaves the reader in no doubt that it can often make a positive contribution to the general appearance of the office and need never detract from it. A modern interior gives both inhabitants and visitors a pleasure that will only be increased if they find that they can also be comfortable. We may hope that the days of jammed thighs are numbered.

M.F

* *Better Offices* Institute of Directors, 10 Belgrave Square, London SW1, 1961, 10s 6d.



hille
CONTRACT DIVISION

VARIATIONS ON A CHAIR—they stack securely, interlock in regular rows, come in six colours. Clip-on textile or vinyl upholstery if you wish. Shells are moulded in polyester resin, reinforced with glass fibre, from matching dies that produce a glass-smooth finish on both sides. The under-frames are attached by rubber shock mounts and fitted with self-levelling nylon glides. One of many glass fibre designs by Charles Eames, produced originally by Herman Miller of America and now made here by Hille. Retail price £8.17.6, more with upholstery, less on orders above six. Visit our showrooms, 39/40 Albemarle Street, London W.1. Hyde Park 9576, and 24 Albert Street, Birmingham 4, Birmingham, Midland 7378, or write for leaflets and we will say where you may see Hille furniture.

Internationally-honoured furniture for homes and offices

Pointers

Britain's success at Triennale

At long last Britain is gaining an international reputation for industrial design and for related skills in designing factory made building systems. The CoID's success in winning the grand international golden compasses award (the *Gran Premio Internazionale la Rinascente Compasso d'Oro*, see page 71) has now been followed by a series of awards for British work at the *Triennale*.

The top prize of all at the *Triennale*, the *Gran Premio*, went to the British school built by the Ministry of Education and Nottinghamshire County Council (county architect W. D. Lacey) using the CLASP system of construction (see DESIGN 143/68 and 69). The school received the further distinction of a special mention. There were also two medals for equipment used inside: a gold medal for sanitary equipment designed and made by Adamsez Ltd; and a silver medal for the school desks designed and made by Sherwood Industries Ltd.

Three other awards were made to Britain by the international jury which included Sir Gordon Russell, formerly director, CoID: a gold medal for the *Swoe*, made by Wilkinson Sword Ltd and designed by the manufacturer's design department in consultation with Hulme Chadwick (a 1959 *Design Centre Award*); a silver medal for the *Anniversary Ware* casseroles and dishes designed by John and Sylvia Reid and made by Izons & Co Ltd (a 1960 *Design Centre Award*); and a further silver medal for the Royal College of Art exhibit designed by Professor Misha Black and Frank Height (see DESIGN 145/58).

The *Triennale* is certainly the most important international exhibition of industrial design and architecture and these achievements on the occasion of Britain's first official participation will give a much needed boost to British prestige abroad.

National images

The announcement of the *Triennale* awards was timely, because it came shortly after a fascinating market research report* which set out to establish the national images which have been built up in the minds of ordinary people by the goods produced in seven countries. Marketing experts and designers have realized for many years that a successful sales policy will often depend on a recognizable and appropriate brand image. Today, at a time of increasing trade between countries, a national image, or what the report describes as a "made-in" image, is likely to be of equal importance.

What images are conjured up when you see such phrases as 'made in Germany', 'made in Italy' or 'made in Sweden'? And, what is more relevant from our point of view, what sort of image is conjured up by people overseas by the tag 'made in England'? The report gives us the answers to these questions and, to the British manu-

facturer intent on improving his grasp of the European market, they reveal some deep-seated prejudices.

The report, published by ROC International, an association of market research firms based in Paris, describes the results of a "pilot study" carried out in England, France, Germany, Holland, Italy, Sweden and the USA. An associated market research firm in each of the countries held depth interviews with about 30 people with the idea of establishing the 'made-in' image of the other six countries. All seven reports were then co-ordinated so that a combined 'made-in' image could be presented for each country.

Hidebound Englishmen

The qualities associated with products made in England show that people abroad still regard us as a country dominated by our past. Our goods are seen as reliable but old fashioned, utilitarian and expensive. They have a reputation for durability and are even regarded as being "virtually indestructible". But they are felt to be "constructed with too much of an eye to efficiency in use and too little to their appearance", though this does not apply to men's clothes, which have a snob appeal, or to textiles. Industry is thought to be based on "old traditions of sound craftsmanship rather than modern mass production". The products we are best known for are woollens and men's clothes, engineering products including cars, whisky, beer, sandwich spread and marmalade, coal and steel, and leather goods including shoes. The aesthetic shortcomings of English products are linked with the picture of the Englishman as "hidebound by tradition". He is "serious, solid, correct and reticent". There must be lessons in all this for those people who are responsible for presenting Britain to the world at large.

Council for export

To try to overcome some of these outdated impressions of British goods will be one of the main objectives of the recently formed Export Council for Europe. Sir William McFadzean, president of the Federation of British Industries, whose appointment as chairman of the new council was announced last October, has been meeting with the council's members to work out a plan of action. The stated objectives of the council are to:

- "a, support, stimulate and initiate action designed to bring to the notice of British firms opportunities for the expansion of exports to Europe;
- "b, explore, exploit and publicise such opportunities and seek new openings for the sale of British goods and services in Europe;
- "c, support the sponsoring bodies, Government departments and other organizations rendering direct services to British exporters and would-be exporters;
- "d, foster and engage in any other activities of an educational and promotional nature which are consistent with these objects and with the trade policies formulated in their respective fields by the Government on the one hand and the sponsoring bodies on the other."

If the success of the recent *British Exhibition* in New York is anything to go by, then we can expect Sir William to tackle these objectives with energy and imagination.

* *The 'Made-in...' Image*, ROC International, 112 bis, Rue Cardinet, Paris 17e.

product development no. 1

New products are evolved in a variety of ways. Sometimes they result from massive market research; sometimes from the whim of a single person. There is no single, golden rule that ensures success, though there may well be general principles which have widespread applications. By examining, in this new series of articles, the way in which outstanding individual products or ranges have been developed, it is hoped that some of these principles will emerge. The success of the

TELEVISION AND RADIO RECEIVERS

discussed in this first article seems due, at least in part, to enlightened management having appointed the right designer and then having given him wide responsibilities.

G. E. MOGGRIDGE

The sense of rightness that one experiences on looking at a well designed product is occasionally deceptive. Deceptive, that is, because there is frequently the tendency to assume that the design process which led to the creation of the product was itself well ordered and inevitable. That this is only rarely so is one of those truths of which those on the outside looking in are seldom aware. The Ultra range of television and radio sets (which made its *début* as a related group of products at last year's *Radio Show*) is a case in point. These sets have been hailed not only as one of the more enlightened approaches to television design in recent years, but as one of the first successful attempts to evolve a *product house style*. Yet its beginnings were by no means obvious.

Work on the new designs began in July 1959. Although this was a boom year for the domestic appliance industry as a whole it was already becoming clear to radio and television manufacturers that they would soon be facing a contracting market. Later that year, over production throughout the industry was to leave an alarming legacy of unsold stocks, and testified to the failure of the industry's conservative design policy which resulted in a sameness in the appearance of its products.

The remedy, in the eyes of T. C. Standeven, director and general manager of the company, was first to reappraise the existing range of television designs and second, as a result of this, to commission staff designer Eric Marshall to prepare a new design. By the standards of the industry - which has been known to regard

experiment in design as the kiss of death from a sales viewpoint - it was a courageous decision.

For Mr Marshall the decision to redesign came at the right moment. He had joined Ultra, from The De La Rue Co, a few months before to form and eventually lead a design team, and, although he had already produced some excellent individual models he was not, in his own self critical estimation, making the positive contribution to the company's progress that his talents and inclinations demanded.

The brief was a particularly free one. It stipulated simply, "a

1 A selection from the *Bermuda* range of television receivers and the related *Rio* range of transistor radio receivers. The *Bermudas* are available in three main combinations of finishes: main frame in veneered edinam with secondary screen frame in gold finished metal; red Vynide with gold finished metal; and blue Vynide with metal stove enamelled white.

a and b, *Bermuda* 21-inch console models, incorporating VHF radio and TV auto-tuner (model *VC 2181*, £103 8s 6d including magazine rack; model *VC 2183B*, £99 15s).

c, *Bermuda* 21-inch table model, TV only (model *VP 2182B*, £78 15s).

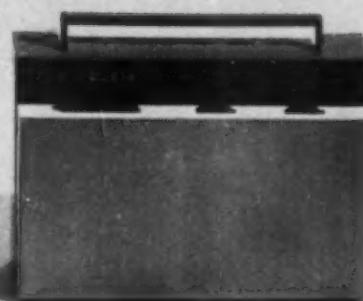
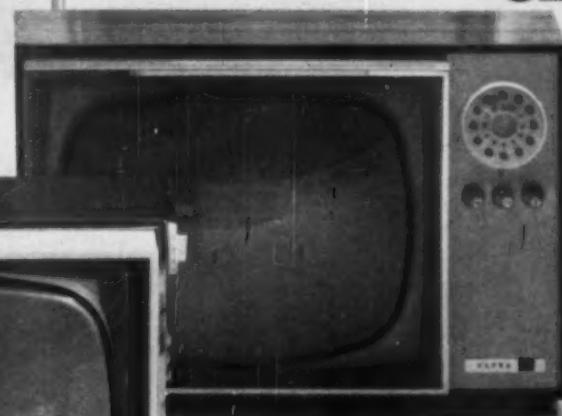
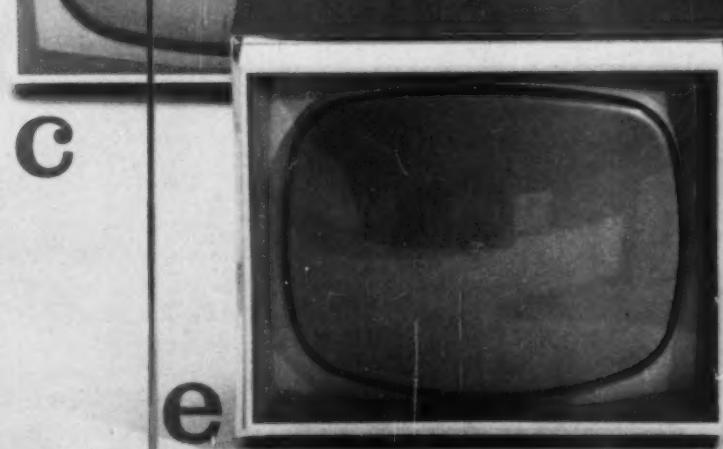
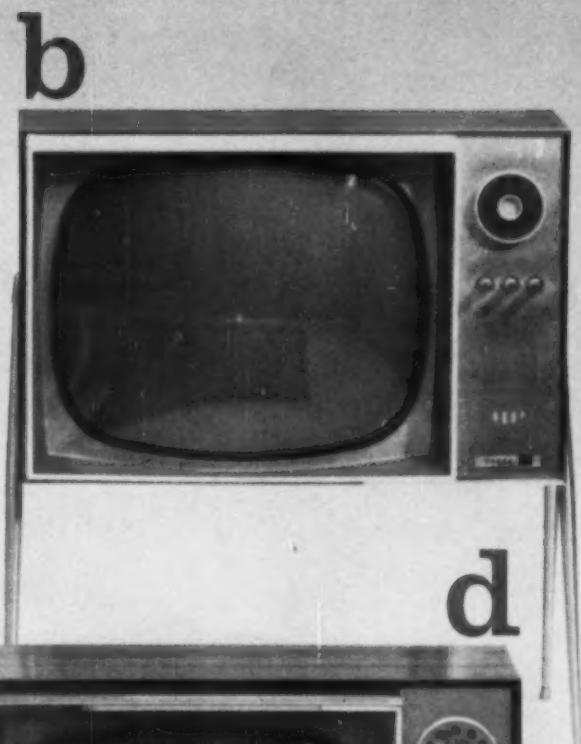
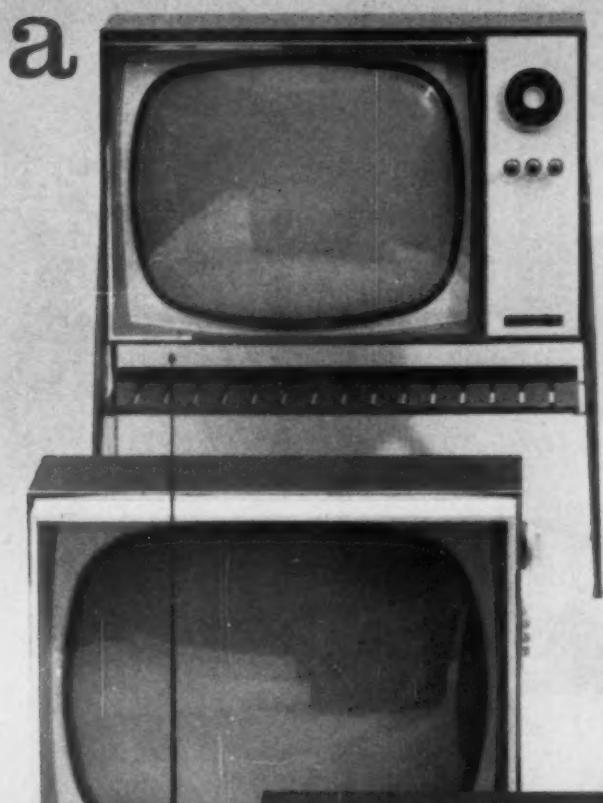
d, *Bermuda* 17-inch table model with VHF radio and TV auto-tuner (model *VR 1781*, £77 14s).

e, *Bermuda* 17-inch table model, TV only (model *VP 1782B*, £65 2s).

f, *Rio* portable transistor radio with red or grey plastics case and fold-away carrying handle (model *TR 70*, £18 7s 6d).

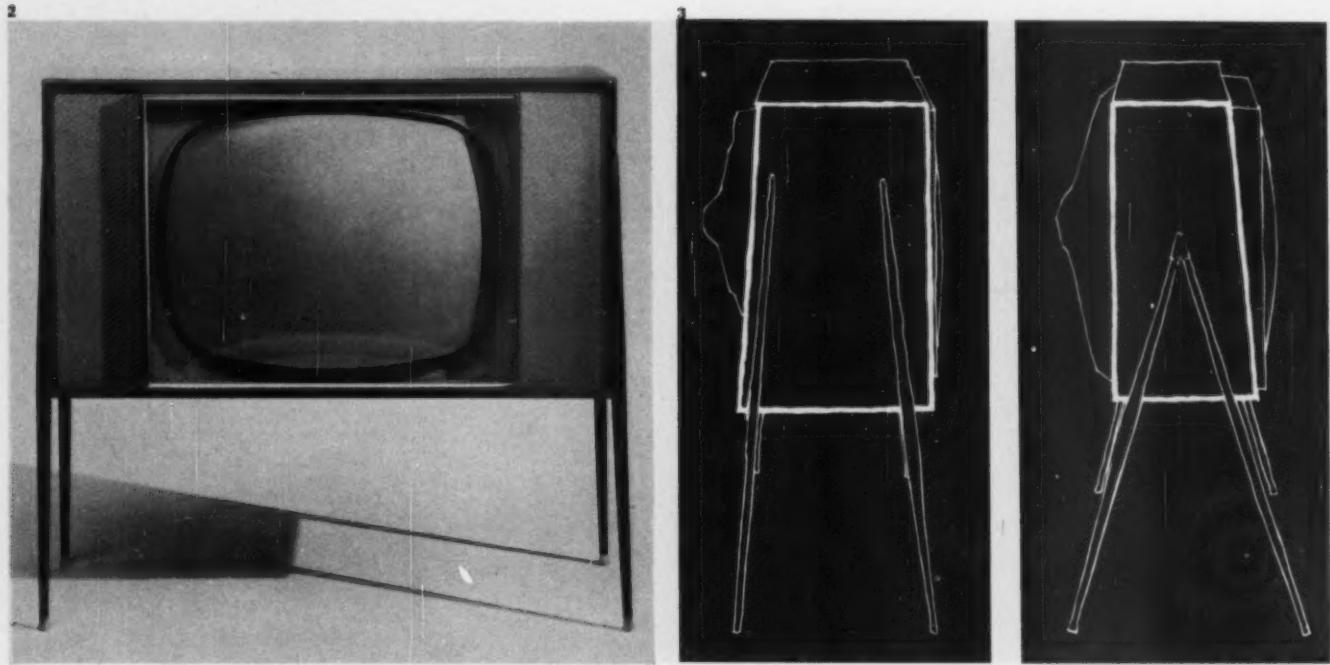
g, *Rio* VHF transistor table model with edinam case and extending VHF aerial (model *TR 81*, £29 7s).

h, *Rio* portable transistor radio with red and white or grey and white plastics case (model *TR 60*, £16 5s 6d). MAKER Ultra Radio and Television Ltd.



2 The forerunner of the *Bermudas*. This earlier 21-inch console model, designed by Eric Marshall, sold well; its clean lines, and the slim treatment of the screen frame, were to reappear in the *Bermudas*.

3 Side views of the early 21-inch console model, *left*, and its successor, the *Bermudas*, *right*, showing how the angled front of the later model gives a greater sense of stability.



luxury set" (singular) to incorporate VHF radio and, as a "sales-plus", a motorised tuner. The board's only other stipulation was for a slim edging to the frame around the screen. One of the faults of the existing sets was felt to lie in the heavy treatment of this part of the design.

One possible source of misunderstanding, however, hinged on the term 'luxury' – a word that means many things to many people. Luxury for Mr Marshall was synonymous with 'sparkle', and squared happily with his own feelings on design generally.

Traditionally there are two distinct and mutually antipathetic schools of thought in radio and television design. The one sees the television set purely as a piece of furniture; the other as essentially an instrument – as a thing which has a character of its own. Mr Marshall favoured the latter approach but with the rider that the set must, nevertheless, fit happily into the normal (ie, rectilinear) environment of the home.

Several months before starting on the new designs, Mr Marshall had produced a console model which sold well and suggested the idea of a range of sets designed from common parts, 2. The new brief presented the opportunity of putting this idea into practice.

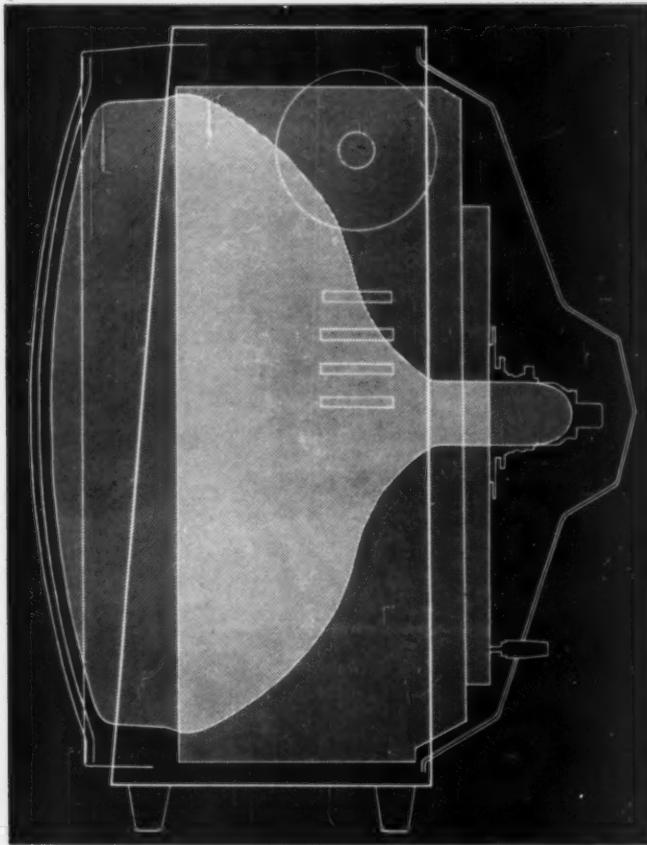
The designer's early ideas began with a simple frame angled to the back to provide a base slightly wider, in profile, than the top.

In this form, however, the vertical front seemed to be falling forward. This was remedied by angling back the main frame at the front, keeping the rear vertical and by enclosing the screen with a separate frame, 3.

From this basic shape two different but clearly related designs emerged. The first, the combined TV and VHF model of the original brief, comprised a longer main frame to accommodate, in a panel alongside the secondary frame, the motorised tuner. The basic proportions were such that an extension of the main frame in this way, on one or (as in a later model) on both sides of the screen, was not only aesthetically acceptable but was indeed desirable in the interests of future flexibility. The other basic type was, of course, the 'TV only' set, 4 and 5.

At this stage Mr Marshall, helped by his assistant Kenneth Skelton (also a newcomer to the company, having joined direct from the LCC Central School of Arts and Crafts), prepared the drawings for model making. Here, the company was well served by model maker Peter Fone, who produced a complete range of excellent models that not only fully interpreted the spirit of the designs but were, in detail and finish, indistinguishable from production models.

Two main considerations governed the choice of materials and



4 and 5 Elevation drawing of the *Bermuda* 17-inch model, 4, showing the main massing of the internal components in relation to the carcase, with, 5, a side view of the model itself. Note how the actual model appears much slimmer due to the shaping of the case and use of colour, though this effect is emphasised in the photograph by perspective distortion.

finishes: the need to maintain the family appearance already inherent in the basic shape, and the need to express the luxury quality demanded in the brief.

For the main frame two finishes were selected; edinam (a lively wood with a good grain) and Vynide (in red and blue) on a wood carcase. For the screen-frame, metal was the obvious choice, both for its strength (for holding the Perspex implosion guard, and for effective dust-sealing) and to achieve the thin edging around the screen. Two finishes were selected for the metal – a Nickelex gold finish (for the edinam and red Vynide sets) and a stove-enamelled white finish (for the blue Vynide sets).

The choice of lettering (Consort and Gill Sans Condensed) was governed as much by the future development of the house style as by the present requirements of the television sets alone.

Presentation... and production

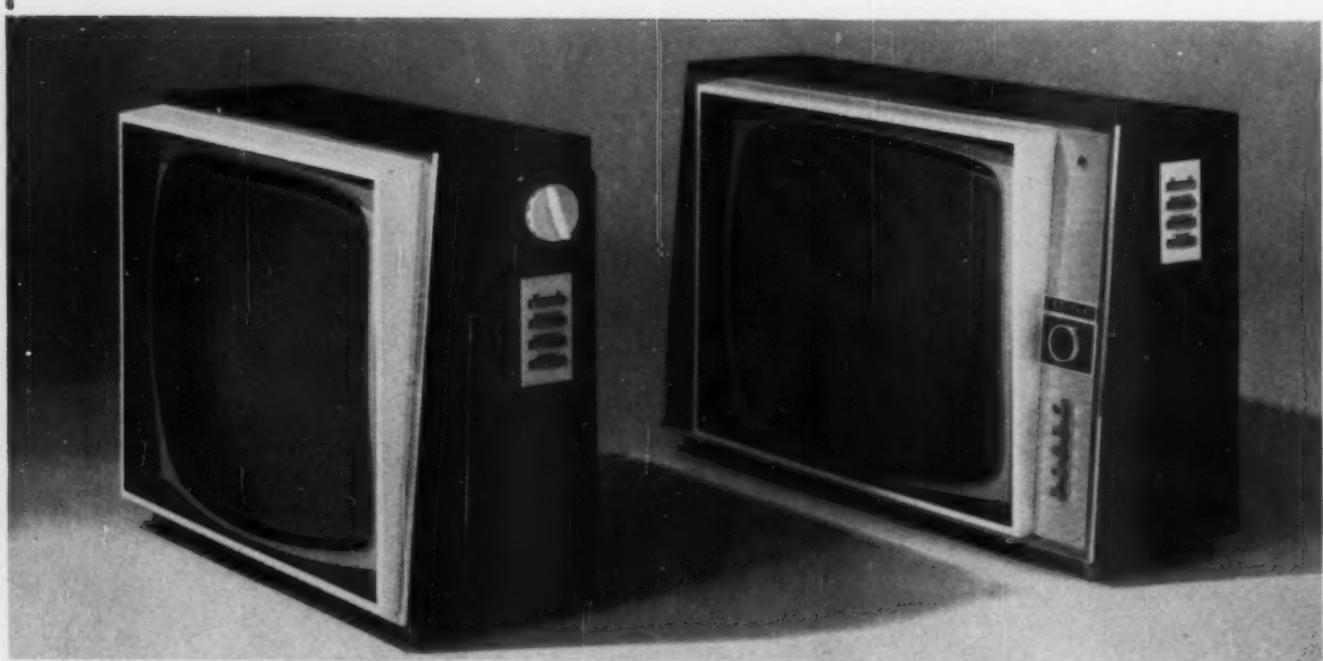
The unqualified approval expressed by the board when the designer presented as a *fait accompli*, not a single luxury set, but a visually related family was the point at which, in Mr Marshall's words, "the real work began". Production drawings were prepared and discussions took place with the technical manager, Alan Bamford (who was responsible for the chassis design) to achieve the

successful mating of chassis and cabinet.

It is significant that very few modifications were called for. Much has been written about the respective merits of the staff designer *vis-à-vis* the consultant but clearly the opportunity here to consult regularly and at will with the technical manager and the mechanical engineers, particularly at the sketch stage, was of considerable value. Such questions as the positioning of the controls, the effective dust-sealing of the tube, the proportions of the chassis itself, and the general question of materials, had already been thoroughly ironed out at sketch and mock-up stage. They were thus readily accommodated into the design while it was in its most fluid form.

Inevitably there were compromises to be made on both sides. The cubic requirements of the tube and circuitry, although considerably less demanding with the introduction of the 110° short-neck tube, required a slight increase in the depth of the main casing over that allowed for in the models. The back of the set – so often a loose, floppy appendage – was given special attention by the designer, 4 and 5. The lettering (warning notices and so on) was rationalized and a more compact shape produced that was visible only when one had passed the widest viewing angle. Here again the engineers were obliged to ask for a modification of the

6 Ultra has already brought out *Bermudas* in the industry's new 19-inch tube size. The 19-inch TV only model, *left*, is in blue Vynide with screen frame in metal, stove enamelled white. The 19-inch TV and radio, *right*, has press button channel selection controls alongside the screen.



shape; but it was one which, Mr Marshall confesses, improved on his original treatment. Again, circuitry demands made it necessary to move the speaker opening from its original position at the foot of the side panel to the top.

A more unfortunate compromise concerned the legs on the matching tables supplied with the sets. It was decided to use tubular splayed legs similar to those on the previous range. There is little doubt, however, that a rectangular form would have been more suitable. The incompatibility is certainly noticeable and adds an unpleasantly dated feature to the range.

Apart from this, however, it was possible to control closely every aspect of production affecting appearance. One contractor, for example, supplied brown flex instead of the charcoal flex ordered. He was told to try again. Needless to say, the modular character of the basic shape – the easy interchangeability of the common parts – simplified the final production and assembly.

The Rio range

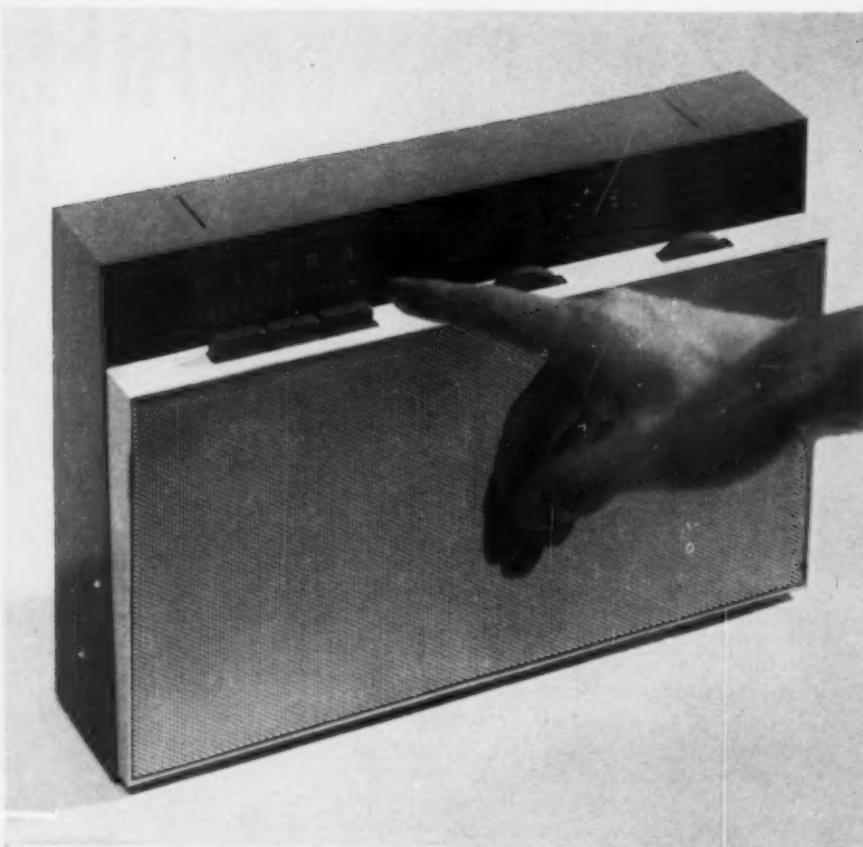
Prior to the extension of the Ultra house style to the projected but until then embryonic *Rio* range of transistor radios, Mr Marshall was appointed head of design, and given a seat on the company's committee of management. His staff was increased; Mr Fone's

prototype section was brought under his wing, as were the draughtsmen responsible for production drawings of the cabinets. He was moved into more spacious accommodation in the main building. These moves by the general manager were designed to give the designer parity with the sales manager and the technical manager at management level and the authority he needed to direct and maintain the now quickening evolution of the house style.

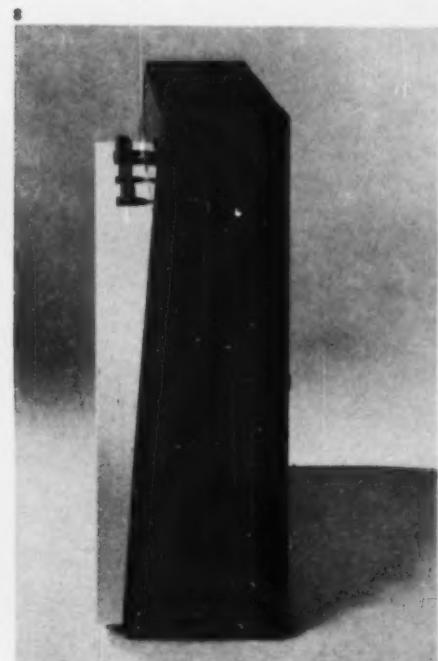
The way in which the essential elements of the *Bermuda* sets were transmitted to the *Rio* range is evident from the accompanying illustrations. The range itself, 1, comprises three basic types – a VHF table model, a portable transistor model and a small portable transistor model.

Here again, early and close co-operation with the technical manager and his staff, and with Richard How, the company's chief radio engineer, equipped the designer with sufficient technical data to enable him to develop his designs in the sure knowledge that he was not asking the impossible in terms of pointer mechanism, positioning of controls and so on.

In the table model particularly, the spirit and style of the *Bermuda* television sets have been reproduced with remarkable fidelity. At the same time, the two-part nature of the basic style presented, at its junction, a convenient platform for the controls, and above, a win-



7 and 8 These front and side views of the *Rio* transistor portable radio receiver show how the style of the *Bermudas* has been accurately and sensitively translated. It has resulted, however, in the set having a definite front and back whereas a portable radio is normally considered as a free standing product that should ideally present a 'front' at all angles of view.



dow for the wave band scale, 7. The use of the metal frame, too, had a merit other than that of its visual relationship with the *Bermudas*; it also provided the strength required for securing the baffle.

Design brought new business

The company makes no secret of the fact that, but for the success of the *Bermuda* range, the whole future of Ultra would have been in serious doubt. The threatening situation described at the beginning of this article deteriorated further in the spring of 1960 when hire purchase restrictions were suddenly reimposed. That Ultra claims to be the only television manufacturer in the country to have increased significantly its share of the market since that date, is freely attributed to the impact of the new designs.

Future development of the Ultra house style is now crystallizing at Eastcote. It is planned to extend the style, not only to other products, but to the company's offices (already begun), to letter-headings, point-of-sale units, delivery vans, cartons and so on. Mr Marshall's responsibilities have also been broadened to include advice on the firm's advertising matter. In the words of Mr Standeven, "I appointed Mr Marshall to become ultimately responsible for all visual manifestations of the company's activities". A fine, rolling phrase that means exactly what it says.



Design conference in progress at Ultra's Eastcote headquarters. Left to right: Kenneth Skelton, design assistant; T. C. Standeven, director and general manager; Michael Fowler, design draughtsman; Peter Fone, model maker; and Eric Marshall, designer. Mr Marshall's appointment as staff designer to Ultra was made as a result of recommendations by the CoID's Record of Designers.

STREET

MICHAEL MIDDLETON, who is secretary of The Civic Trust, has been looking at the CoID's recently opened



The author, on the site of the exhibition

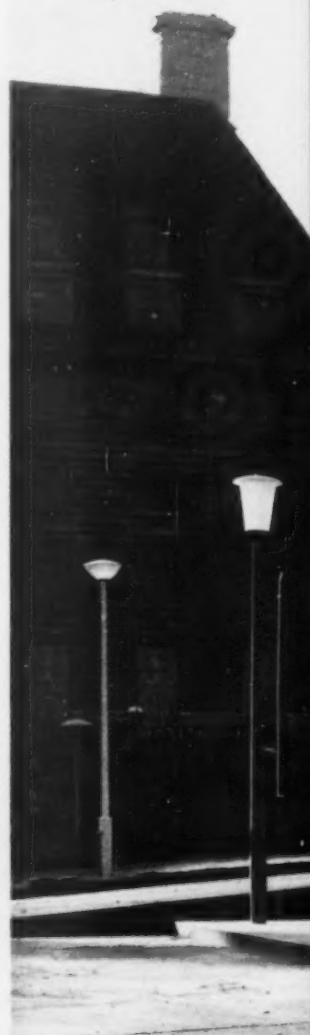
Now that the thing is done, does it not seem extraordinary that there has never been, until November 1960, an opportunity for those with the responsibility for furnishing our towns to see and compare *in situ* the best of what street furniture there is to choose from? As with all worthwhile ideas, one is left wondering why on earth no one had thought of it before.

The exhibition is to be found on the South Bank, between the new Shell building and County Hall, and it will continue there by courtesy of the LCC until such time as the land may be needed for redevelopment. It is, of necessity, highly selective: one wishes, indeed, that it were larger, for the usefulness of this kind of operation increases as the square of the number of items shown. Lighting columns are there in reasonable strength – 17 of them, from 10 ft to 35 ft high – but the three bus shelters, five litter bins and three outdoor seats have the air of appendages to the main show. The site will comfortably take more and, as further approved designs come into production, the exhibition will in fact be augmented.

Comment on the individual items shown is not called for here. As objects in their own right, all are pleasing and some are very good indeed. What the exhibition does is, a, to clarify the image left by publicity photographs (for example, the Southampton outdoor seat, with its exposed aggregate supports, is greatly superior to the photographs of it I have seen); b, to enable the *scale* of the object and the effect it will have upon its surroundings to be grasped. (how many of us can tell the difference between a 25-ft column and a 35-ft column in an 8-in photograph?); c, to ensure that the right lantern is married to the right lighting column (we can all think of mixed marriages that have come to grief); and, d, to enable simultaneous comparisons between alternatives to be made.

It is much to be hoped that the existence of the exhibition will become sufficiently well known for architects and local authority members and officers habitually to spend 15 minutes on the South Bank whenever they are in London. It will be nice for the delegates attending next year's International Union of Architects Conference to find themselves placed in the middle of the first exhibition of its kind in the world. It will be nicer still if we, as a nation, can be seen to be *using* it.

A final thought: one is left with the realization that the best street furniture in Britain still comprises separate objects, each conceived in a vacuum. In only one case, apparently, has a model been specifically designed to go with any other – in a common module or a common style. If the South Bank exhibition should cause that penny to drop, it could mean the biggest step forward in street furniture in our time.



FURNITURE EXHIBITION

and sums up his impressions in this review



The designs on show, and others selected by the CoID's Street Furniture Panel, can also be referred to in 'Design Index' at The Design Centre

B. SHACKEL

Mass production lines in factories are subjected to detailed analysis and motion studies in an attempt to ease the operator's task and improve efficiency. Yet there are many other working situations where small, skilled, professional teams have to work at speed, and here also a well designed work space can speed, simplify and ease the task. In this article the author considers the general problems of work space layout, relating them to a dental surgery and laboratory which have been designed to suit the intricate and delicate tasks of the dentist, assistant and technician.

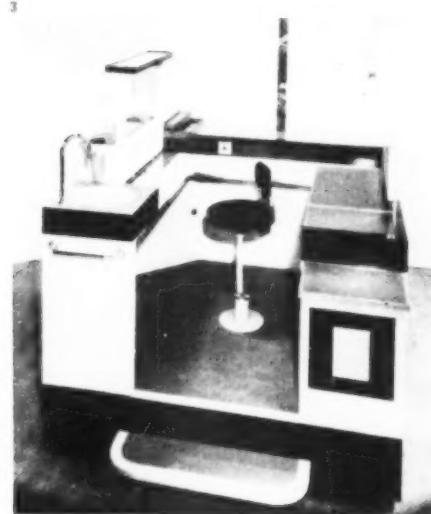
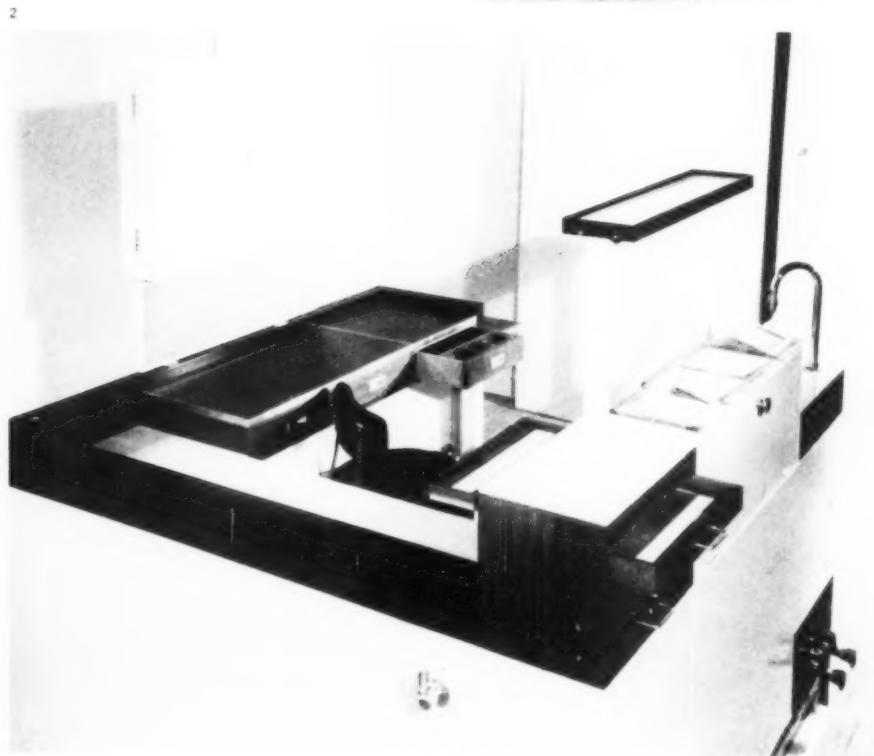
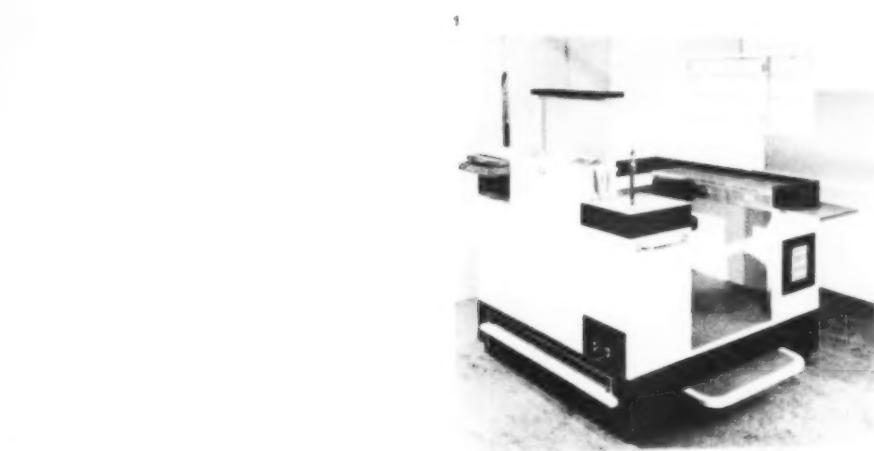


The skilled craftsman traditionally builds his own equipment around him to suit his personal needs and the demands of his working methods. In industry, particularly in mass production factories, much time and study is devoted to analysing and improving the layout of equipment around operators to ease their tasks and increase their efficiency. In between these two extremes lies an interesting range of working situations in which persons of considerable intelligence and extensive training practise the mental and/or manipulative skills which are the essence of their work; the sorts of person envisaged are aircraft pilots, doctors, dentists, high level business executives, and senior controllers in charge of operations systems (such as the electricity grid, or air traffic).

Such men often have to work under some degree of speed and load pressure; usually they have not more than one assistant, because the type of work prevents any more than one being of real

value. Also the work space available for them or their assistant, or for both, is often somewhat confined because of limitations inherent in the work or because the equipment, instruments, records, communication channels, etc, must all be readily available close to hand. While the ability and skill of the principal and his assistant are paramount, the design and layout of the work space around them and the positioning of the various items of equipment can have a considerable effect upon the smooth and efficient progress of the work to be done.

When called upon to handle such problems, the designer should be able to find satisfactory solutions, particularly with the assistance which can be obtained from ergonomics and work study; but it is also important to recognise how much can be, or may have been, achieved by some of these skilled practitioners who have themselves been able to design their own work space layouts.



As a particular example, the dental surgery unit shown in 1, 2 and 3, designed by John Burnaston in conjunction with his architect C. Hyde, has been tailored to the inter-working routines of the dentist and his assistant so that unnecessary causes of fatigue are eliminated. The essence of the solution was to provide a unit which (a) accommodates everything required by dentist and assistant, with items readily to hand for each in a compact layout, and (b) enables both dentist and assistant to remain seated and yet be within reaching distance of each other. To achieve this solution, the designer of a good dental surgery must, as Mr Burnaston himself says, in part become "a choreographer to introduce an appropriate discipline of rhythmic actions designed to reduce fatigue and impart a mental equilibrium. This is relatively easy in a dental surgery where fewer than 10 types of operation or *per diem* are repeated over and over again".

Moreover, improvements in apparatus and techniques since the war have added considerably to the importance of good surgery design. Whereas before the war a typical session with the dentist lasted for half an hour, of which perhaps five minutes were used in coming in, getting into and out of the chair, etc., and 23 minutes actually by the dentist at work, nowadays, with the modern high speed dental drill and other improvements, a typical session may consist of still the same five minutes of getting in and out, perhaps another five minutes waiting for the local anaesthetic to take effect, for the preparation of amalgam and for the handing to and fro between the dentist and assistant of various items, but only about five minutes of drilling and other work on the teeth. In other words, the proportion of effective time at work by the dentist with the patient, compared to time lost in waiting and in other processes, is getting less satisfactorily even though the total time per patient is definitely reduced. It is not possible to shorten by much the time spent greeting the patient and placing him in the chair, etc., unless dentistry is to become merely a sausage machine process; attention must therefore be given chiefly to the position of the dentist and his assistant, and to the interaction and coordination between their tasks.

The surgery unit, 1, 2 and 3, which Mr Burnaston has designed, illustrates the correctness of his views and is the fundamental tool enabling great improvements in smooth working methods, with a consequent reduction in fatigue. The assistant can pick out the card of the patient as soon as the patient is announced, go to the door to show the patient in, introduce him to the dentist and hand the dentist the

PLANNING THE PRACTICE

R. SHACKEL

Mass production lines in factories are subjected to detailed analysis and motion studies in an attempt to ease the operator's task and improve efficiency. Yet there are many other working situations where small, skilled, professional teams have to work at speed, and here also a well designed work space can speed, simplify and ease the task. In this article the author considers the general problems of work space layout, relating them to a dental surgery and laboratory which have been designed to suit the intricate and delicate tasks of the dentist, assistant and technician.

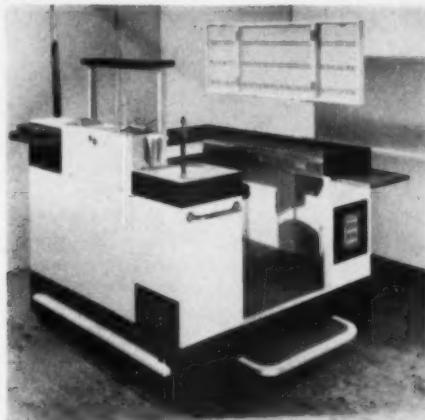


The skilled craftsman traditionally builds his own equipment around him to suit his personal needs and the demands of his working methods. In industry, particularly in mass production factories, much time and study is devoted to analysing and improving the layout of equipment around operators to ease their tasks and increase their efficiency. In between these two extremes lies an interesting range of working situations in which persons of considerable intelligence and extensive training practise the mental and/or manipulative skills which are the essence of their work; the sorts of person envisaged are aircraft pilots, doctors, dentists, high level business executives, and senior controllers in charge of operations systems (such as the electricity grid, or air traffic).

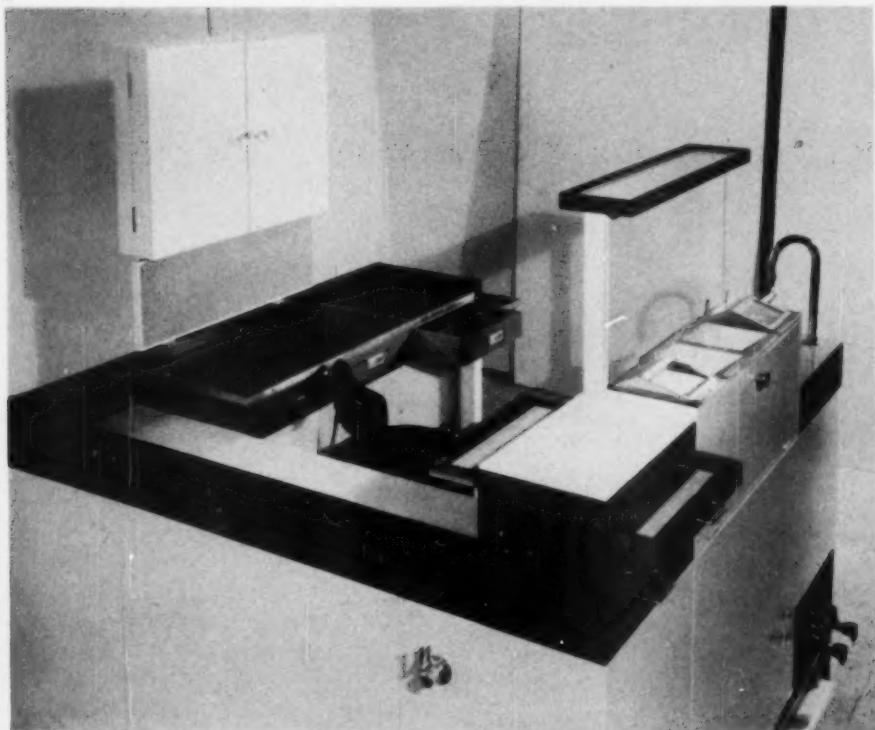
Such men often have to work under some degree of speed and load pressure; usually they have not more than one assistant, because the type of work prevents any more than one being of real

value. Also the work space available for them or their assistant, or for both, is often somewhat confined because of limitations inherent in the work or because the equipment, instruments, records, communication channels, etc, must all be readily available close to hand. While the ability and skill of the principal and his assistant are paramount, the design and layout of the work space around them and the positioning of the various items of equipment can have a considerable effect upon the smooth and efficient progress of the work to be done.

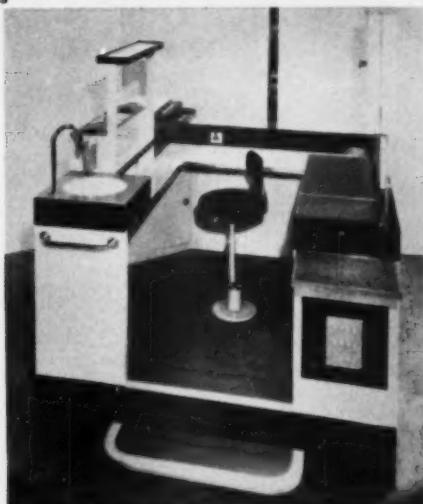
When called upon to handle such problems, the designer should be able to find satisfactory solutions, particularly with the assistance which can be obtained from ergonomics and work study; but it is also important to recognise how much can be, or may have been, achieved by some of these skilled practitioners who have themselves been able to design their own work space layouts.



2



3



DENTAL SURGERY

As a particular example, the dental surgery unit shown in 1, 2 and 3, designed by John Burnaston in conjunction with his architect C. Hyde, has been tailored to the interwoven routines of the dentist and his assistant, so that unnecessary causes of fatigue are eliminated. The essence of the solution was to provide a unit which: a, accommodates everything required by dentist and assistant, with items readily to hand for each in a compact layout; and b, enables both dentist and assistant to remain seated and yet to be within reaching distance of each other. To achieve this solution, the designer of a good dental surgery must, as Mr Burnaston himself says, in part become "a choreographer to introduce an appropriate discipline of rhythmic actions designed to reduce fatigue and impart a mental equilibrium. This is relatively easy in a dental surgery where fewer than 10 types of operation or *pas de deux* are repeated over and over again".

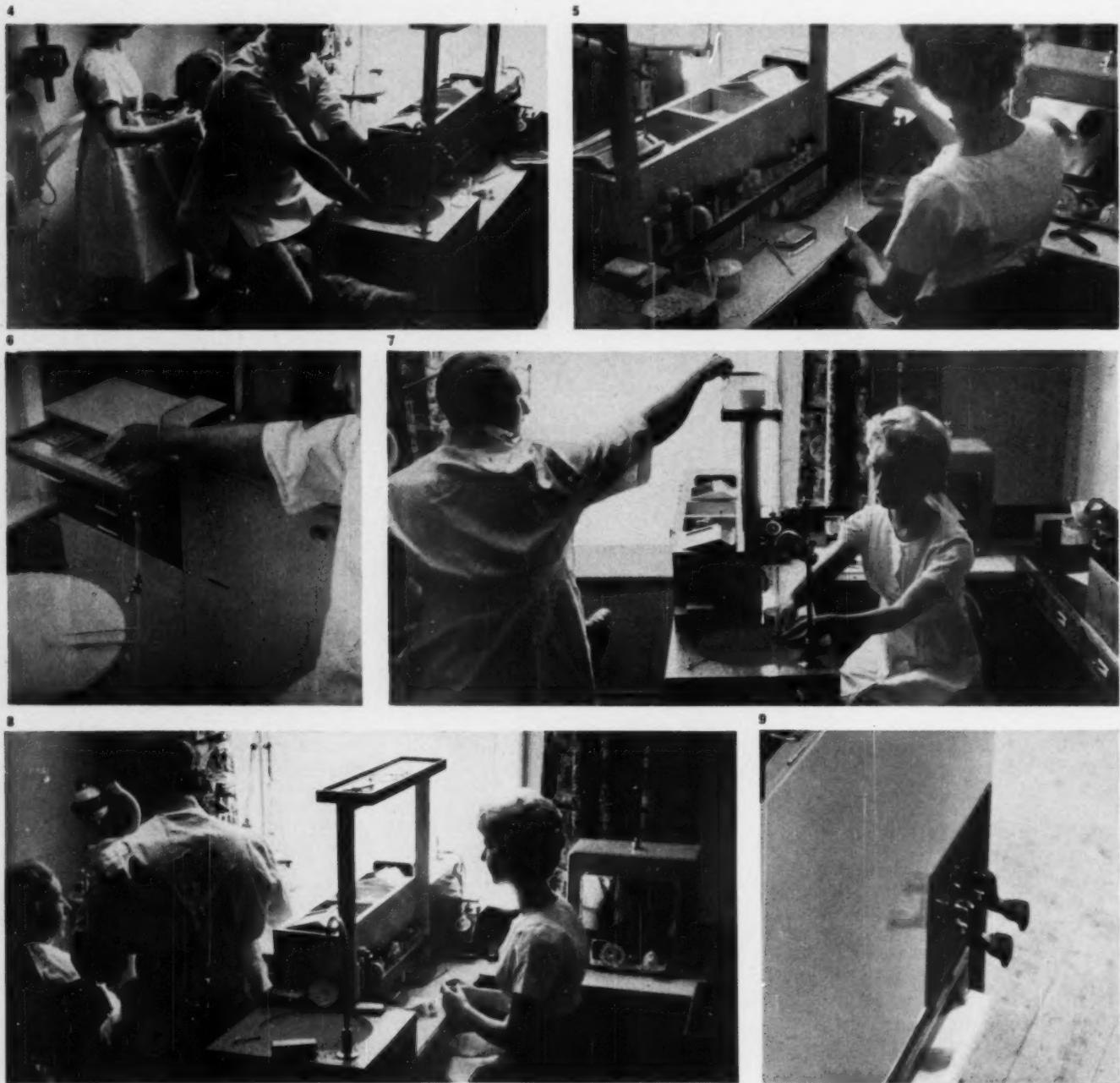
Moreover, improvements in apparatus and techniques since the war have added considerably to the importance of good surgery design. Whereas before the war a typical session with the dentist lasted for half an hour, of which perhaps five minutes were used in coming in, getting into and out of the chair, etc, and 25 minutes actually by the dentist at work, nowadays, with the modern high speed dental drill and other improvements, a typical session may consist of still the same five minutes of getting in and out, perhaps another five minutes waiting for the local anaesthetic to take effect, for the preparation of amalgam and for the handing to and fro between the dentist and assistant of various items, but only about five minutes of drilling and other work on the teeth. In other words, the proportion of effective time at work by the dentist with the patient, compared to time lost in waiting and in other processes, is getting less satisfactory even though the total time per patient is definitely reduced. It is not possible to shorten by much the time spent greeting the patient and placing him in the chair, etc, unless dentistry is to become merely a sausage machine process; attention must therefore be given chiefly to the position of the dentist and his assistant, and to the interaction and co-ordination between their tasks.

The surgery unit, 1, 2 and 3, which Mr Burnaston has designed, illustrates the correctness of his views and is the fundamental tool enabling great improvements in smooth working methods, with a consequent reduction in fatigue. The assistant can pick out the card of the patient as soon as the patient is announced, go to the door to show the patient in, introduce him to the dentist and hand the dentist the

card at the same time. After explaining what is to be done as he ushers the patient into the chair, the dentist scrubs his hands as the assistant prepares the patient, 4. The assistant has already placed freshly sterilized instruments in the connecting drawers, 5, which are now ready to hand for the dentist to take out, 6. As he finishes with each tool, he places it on top of the upper shelf ready for washing and sterilization, 7. This latter arrangement is the one major item to be

criticised in the design. Because the top shelf is solid and not of transparent glass, the assistant cannot see through it from underneath and may leave the instruments intended as she was seen to do in 8, where the instruments had been left there for at least five minutes. Two other items were criticised on the original design by an ergonomics specialist, the position of the basin filling pipe, 3, which would be in the way of the dentist's arms, and the position and

shape of the water tap pedals, 9. Both items have since been modified (cf basin pipe in 3 and 4). However, apart from these small criticisms, there is no doubt that the unit solves with considerable success most of the problems in work-space layout posed by the specialist, highly skilled team of dentist and assistant. The cranked swivel arms of the stools used by dentist and assistant are key factors, not merely for the dentist but particularly for his assistant in bring-

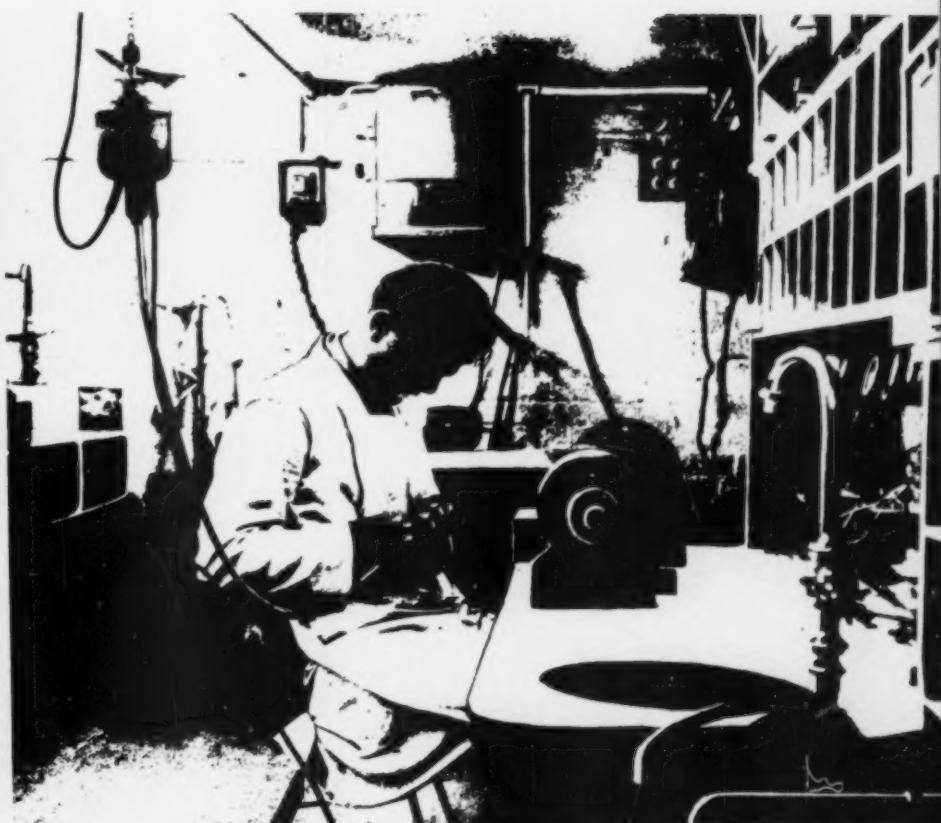


ing within reach all the important instruments and apparatus and permitting an uncluttered layout. As the dentist drills, makes a filling, measures for dentures, takes moulds of upper and lower teeth, etc, so he and his assistant have everything ready to hand; she can easily pass him instruments, 10 and 11, make notes, etc, and both can work with the minimum of unnecessary movement and the maximum of convenience and relaxed efficiency.

10



11



DENTAL LABORATORY

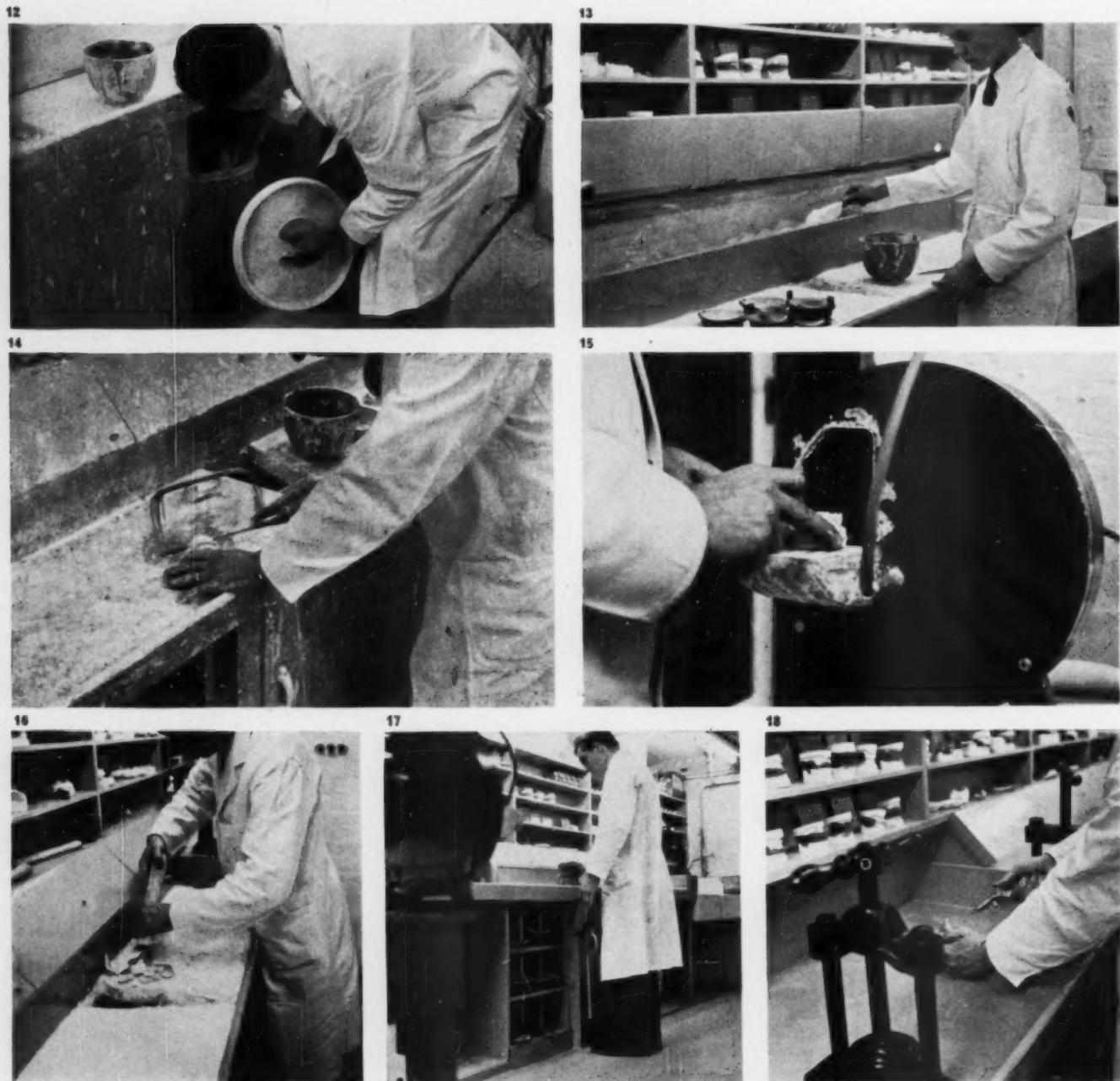
The design of the work space is, of course, just as important in the dental laboratory, to ensure smooth and efficient treatment of the work in hand, as it is in the dental surgery. In the laboratory, as in other spheres of productive work, even quite simple improvements in the layout and methods used can give surprising increases in the amount of work completed every week. A dental laboratory is basically a miniature factory for producing articles which must have a Savile Row fit. Dentures are well nigh useless unless they are matched accurately to the patient's mouth. A high standard of workmanship, therefore, is essential, and it is probably the very necessary and correct emphasis upon this primary requirement which has prevented more rapid adoption of simple mechanisation and other techniques which are

commonplace in industry.

In designing his laboratory, Mr Burnaston has culled ideas from common industrial usage and human engineering, and has incorporated many of the ideas and suggestions of his technician. Plaster of paris is a basic raw material for all denture work, and in a busy week the laboratory may well use up to 80 pounds. In many laboratories each shovelful has to be scooped up from a bin stowed under the bench, 12; the large bins at the back of the bench, 13, must obviously save much time and hard muscular effort for the technicians. The traditional method of cutting and shaping a hardened plaster mould is with a special saw, 14; grinding with an abrasive wheel, 15, is some 300 or 400 per cent faster. A well positioned and shaped hole in the middle of the bench, with a suitable scraper bar makes for very simple and rapid disposal of waste plaster, 16. Another basic design

factor in speeding work is the provision of adequate and well placed storage facilities for all the various items which have to be stored. Notice particularly the shelves in 18, exactly the right height to take the full mould for a complete set of dentures; again, the storage of mould clamps beneath the work top, readily to hand but out of the way when not required, 17, has been well conceived. The use of compressed air for rapid drying of investments, 19, is another good example of how very simple aids can greatly speed the work in the laboratory.

A final comparison between old and new is in the technique used for shaping the work. The traditional method is, of course, filing by hand, 19; the use of a powered rotary burr, 20, and also an air turbine driven burr greatly speeds the work and also requires less physical effort from the technician, an important point which should not be overlooked.

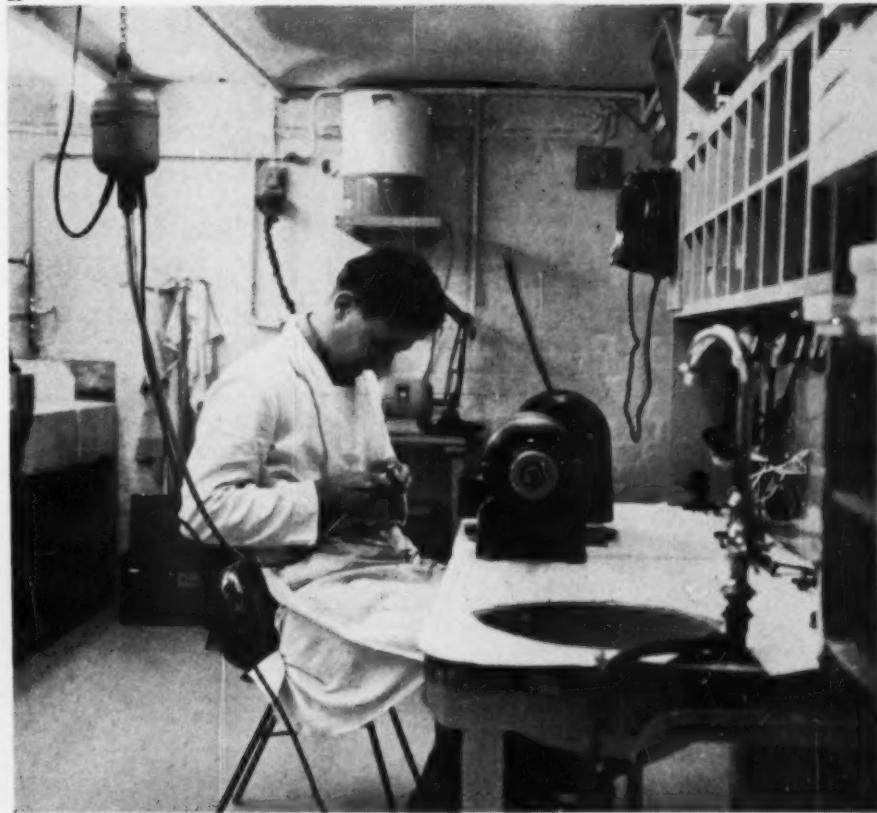


As a result of these improvements in work space layout the laboratory is capable of producing 150 dentures a week. This figure is far beyond the requirements of the average busy practice. However the essential part of fashioning a denture is an operation performed by hand. This hand fashioning might be described by an industrialist as the production bottle neck; if it were necessary to achieve the full potential of the layout as, say, in a large dental institution, then many technicians would be required to make it possible. However, the high efficiency of the processing system designed by Mr Burnaston does mean that his technician can devote a greater proportion of his time to the creative side of the work. Moreover, for every denture which requires it (and this represents about 30 per cent of the cases) there is ample time for the precision technique of 'surveying' to be used.

19



20



Photographs 1, 2 and 3 are by W. E. Middleton and Son; 4, 5, 6, 7, 8, 10, 11, 12, 14 and 19 are by B. Shackel; 13, 15, 16, 17, 18 and 20 are by John Garner.

CONCLUSIONS

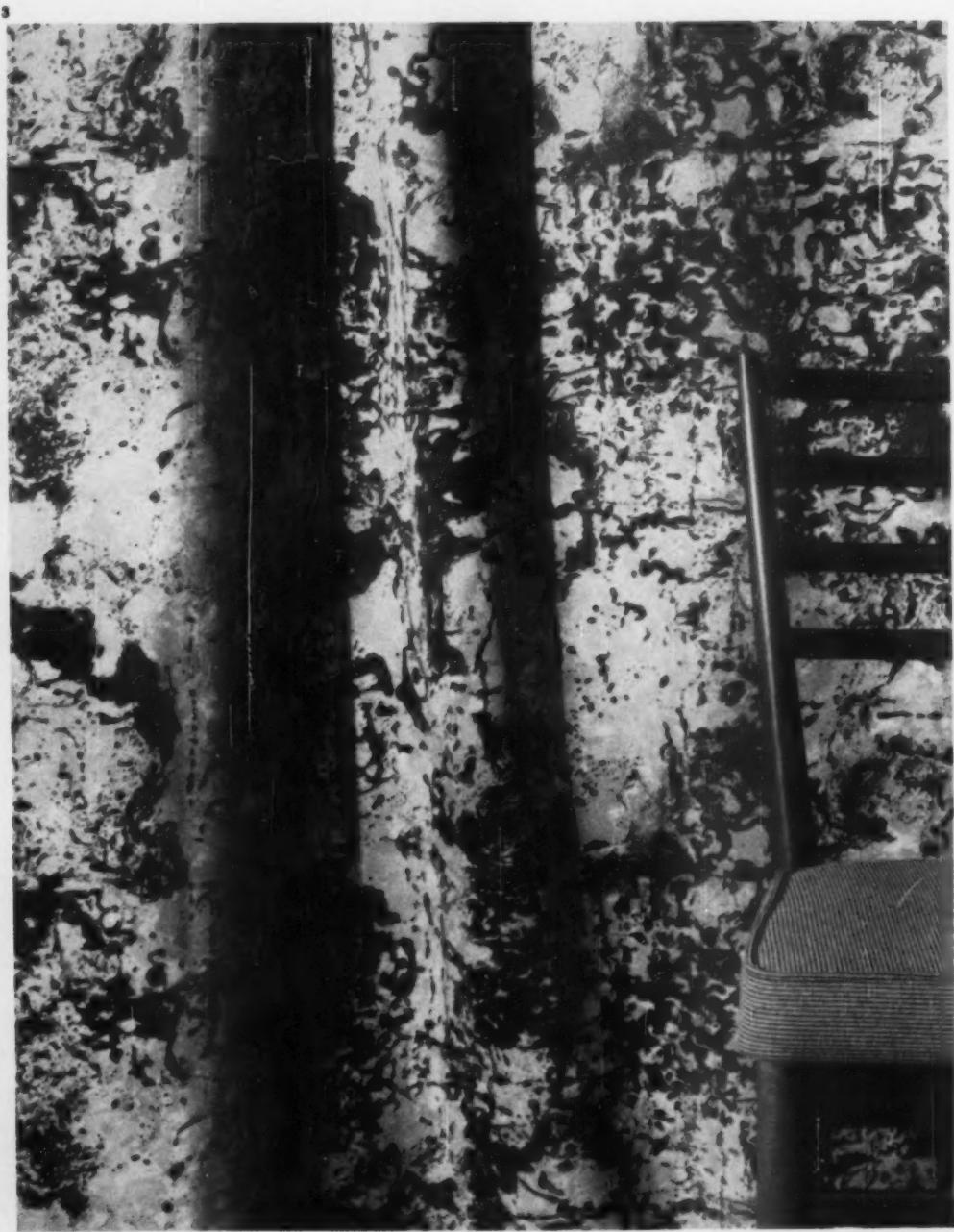
It is thus clear that in both spheres discussed above, with his dental surgery unit and in the design of his laboratory, Mr Burnaston has made a real contribution towards the improvement of good dental practice by reducing fatigue in what has always been a difficult and exacting task, but is the more so today by reason of the current shortage of practitioners. An increase in effectiveness of dental manpower is particularly important in this country at present, especially in the School Dental Service which is apparently seriously understaffed (according to Dr G. L. Slack, Dental School, University of Liverpool, *British Dental Journal*, September 1959).

The results and illustrations, particularly with the dental surgery, exemplify clearly the high degree of integration which must be achieved in the final designs if the diverse intricate procedures

typically involved in the work of these specialised teams are to be matched by an adequate work space layout. It is clear that when tackling the design of the work space for such teams, the designer must devote particular attention to learning all the processes and operational sequences involved; extensive consultation with the typical user is obviously vital. Moreover, many of the work space problems will have one principle in common with the dental surgery unit, namely the need for a considerably extended working desk; there is little doubt that many of the problems will be considerably helped by the interesting and important idea of the swivel radius arm stool to increase the reach and the working area for the operator while he retains a comfortable seated position. (A similar development of a swivel stool was shown in DESIGN 134/ 51-53.)

REVIEW OF CURRENT DESIGN

A selection of items recently accepted for 'Design Index', the CoID's photographic and sample record of current well designed British goods. 'Design Index' forms an essential part of The Design Centre, 28 Haymarket, SW1, which is open on week days from 9.30 am - 5.30 pm, and on each Wednesday and Thursday until 9 pm.



1 Polish spreader (model *Drybright Mk II*) moulded in medium impact polystyrene, pad faced with nylon fabric. Polish seeps through pad. Grey body finish. DESIGNER Peter Ray. MAKER J. Goddard & Sons Ltd. £1 5s.

2 Free standing fire (model *Rayburn*), with or without boiler, in cast iron. Firebox lined with fire brick. Available in various colours. Height 25 inches; depth 10½ inches; width 16 inches. DESIGNER David Ogle. MAKER Allied Ironfounders Ltd. From £18 1s 9d.

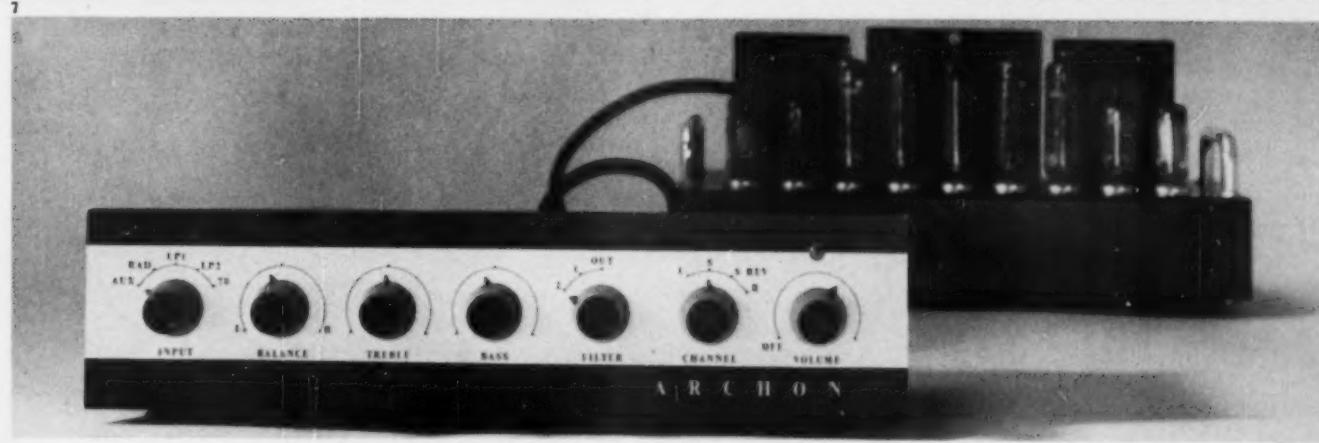
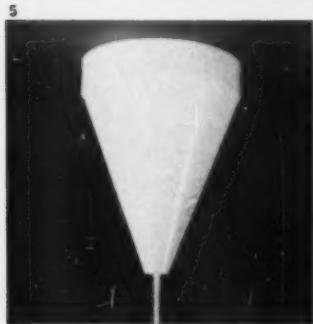
3 Furnishing fabric (model *Atlanta*) in printed cotton satin. Three colour ways. 48-inch wide pattern on 50-inch wide fabric. DESIGNER John Drummond. MAKER Hull Traders Ltd. £1 17s 6d per yd.

4 Plastics decanter (model *Easygrip 5000*) in white polythene. Lid in various colours. Height 9½ inches; depth 3 inches; width 5 inches. Capacity 2½ pints. MAKER Taylor, Law & Co. 6s 11d.

5 13-amp *Cordcone* ceiling switch in urea bakelite, with ivory or brown finish. Available with neon pilot lamp. Length 3½ inches; diameter 2½ inches. Single pole, single or double way, and double pole, single way models available. DESIGNER I. J. Pickering. MAKER Falk, Stadelmann & Co Ltd. From 5s 2d.

6 Mirror (model F 32242), with light unit and switch. Plate glass mirror with black frame; grey PVC covered panel with satin etched opal light unit. Position of mirror and panel may be reversed. Height 14 inches; width 24 inches. DESIGNER John F. Hildred. MAKER The General Electric Co Ltd. £7 19s 3d.

7 Stereophonic amplifier and pre-amplifier (model *Archon*). Input sensitivity to the pre-amplifier is 7 mV for 10 W maximum output from amplifier. Finish in olive and cream perspex. CONSULTANT DESIGNER Erich Rosenthal. MAKER Tansley Howard Ltd. £20 9s 6d (pre-amplifier); £29 8s (main amplifier).



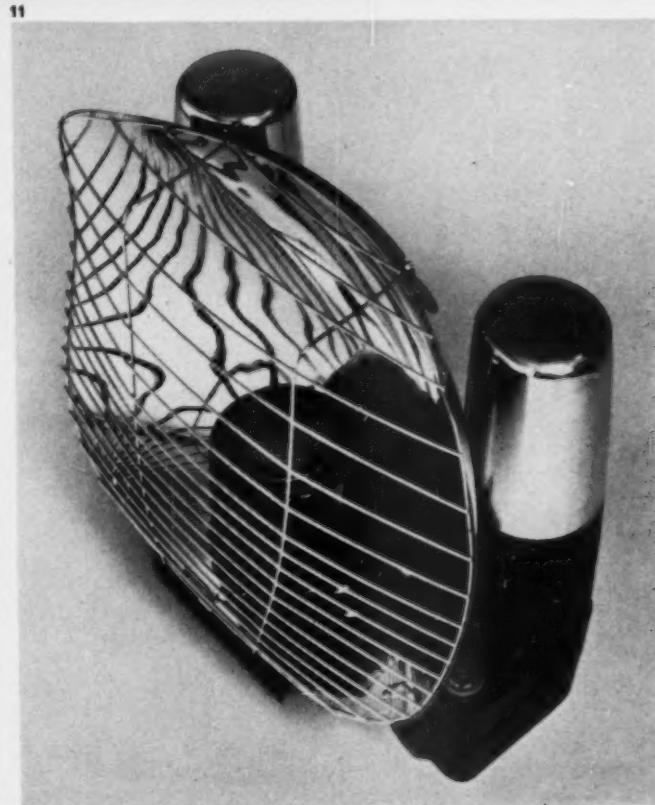
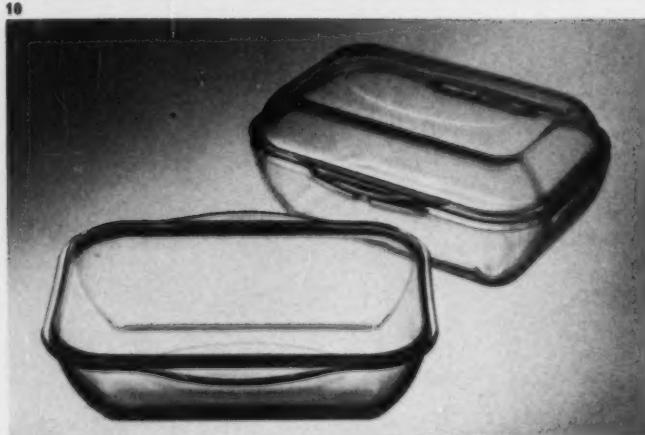
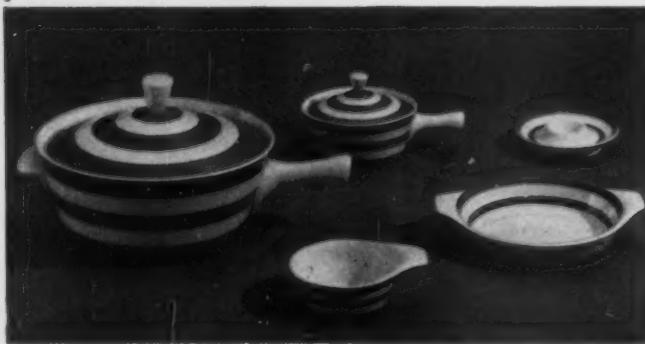
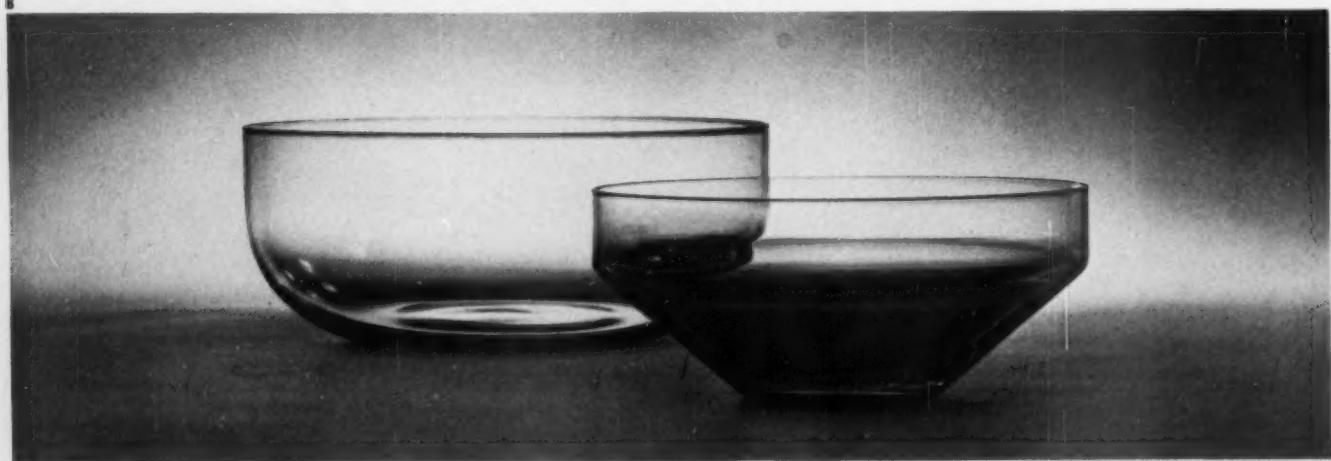
Review of current design

8 Glass bowl and fruit set (models *LSW39* and *LSW32*). Available in harlequin colours. Bowl 10 inches diameter; fruit set 5 inches and 8 inches diameter. DESIGNER R. Stennett-Willson. MAKER The General Electric Co Ltd. £2 6s (*LSW39*), from 13s 6d (*LSW32*).

9 Kitchen earthenware (model *Cornish kitchen ware*) in blue and white. MAKER T. G. Green & Co Ltd. Prices from maker.

10 Chicken casserole (model *Phoenix CC1*) of heat resisting glass. DESIGNER Arthur Brown. MAKER British Heat Resisting Glass Co Ltd. £1 7s 6d.

11 Portable paraffin radiant heater (model *Silver Queen 8002*) of die cast aluminium and steel. Finished in matt black and chromium plate. Polished reflector. Height 18½ inches; depth 11 inches; width 21 inches. DESIGNER A. G. Imber. MAKER Aladdin Industries Ltd. £17 13s 1d.

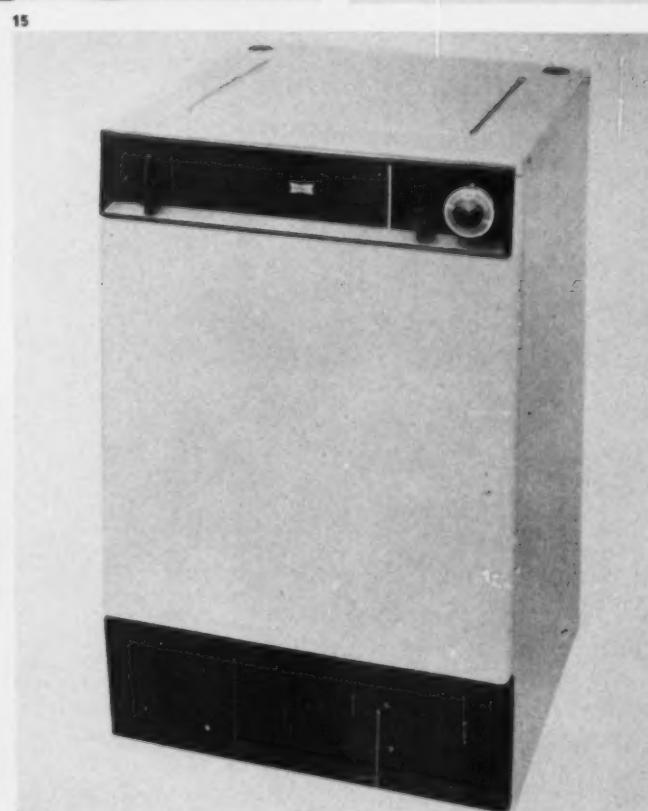


12 21-inch television receiver (model *V410*) in paldoa veneered cabinet with polyester finish. Green plastics cathode ray tube surround. Height 21½ inches; depth 14½ inches; width 25 inches. DESIGNER *Alan Bedall*. MAKER *Pye Ltd.* £72 19s 6d.

13 Food mixer (model *Kenwood Chef A701*) in aluminium alloy and mazak pressure die castings. Enamel finish in white or cream, plastics parts in grey. Juice extracting, liquidising, peeling, grinding, slicing, shredding, can opening, colander and sieve attachments available. Height 12 inches; width 9½ inches; length 15 inches. CONSULTANT DESIGNER *Kenneth Grange*. MAKER *Kenwood Manufacturing (Woking) Ltd.* £27 6s.

14 Armchair (model *HCI*) with frame of steel rod and mahogany. Teak or oak arms. Cushions of 2-inch thick polyether, moquette-covered. Weatherproof covers available for open-air use. Parallel sides for space conservation. Choice of several colour finishes. Seat height 18 inches; depth 18 inches; width 24 inches. DESIGNER *Aidron Duckworth*. MAKER *Holborn Metal Works Ltd.* £14.

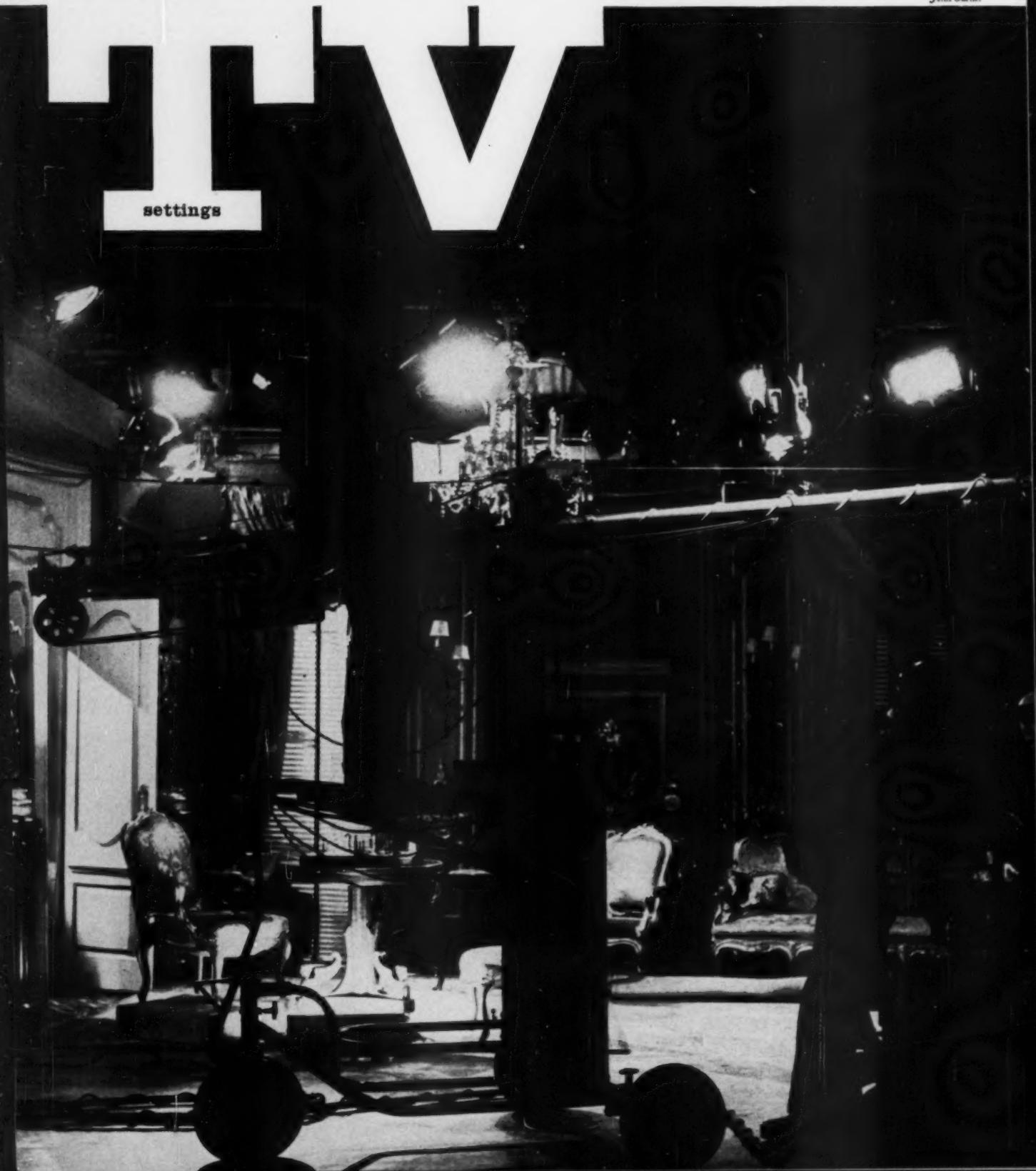
15 Parnall washer, rinser/spindryer (model *EW60*) in sheet steel. Finish in white or cream stove enamel. Washing, rinsing and spindrying carried out in one tub. Model *EW60H* has built-in heater. Height 36 inches; width 22 inches; depth 23½ inches. Capacity 7½ lb dry clothes in 8 gallons water. DESIGNER *A. B. R. Dow*. MAKER *Electrical division, Radiation Ltd.* £78 15s (*EW60*), £82 19s (*EW60H*).



In the third article in this series on various aspects of television design, the progressing of one episode in a BBC-tv drama production is used to demonstrate how a television designer works. The author relates the specific problems of this production to the more general limitations of TV setting design

John Garner

settings



In the first article in this series (DESIGN 138/28-31),* it was suggested that television settings have a two-fold function: on the one hand, to isolate the performers from the background of the studio – cameras, lights, booms, cables, technicians, etc, and on the other, to provide an environment that underlines and enhances the meaning of the performance itself. It was also suggested that this dual function was employed in one of two basic ways: either as studio settings designed for light entertainment, talks, music, etc, or as script settings for drama, dramatised documentary, situation comedy and feature films made for television.

Studio settings, by the nature of the programmes they are made for, would appear to offer the designer more 'creative freedom' than script settings, where in most cases he has to follow quite literally the letter of the script. But even in the liveliest studio settings this freedom tends to be something of an illusion, because the designer is powerless without the thematic, usually verbal, structure the programme runs on. Both types of setting, studio and script, depend on the thematic content of the programme for their point, whether that content is merely a dance routine, a handful of questions for experts to answer, or a play to be acted. The designer might confuse this content, or extend it, but it is difficult to see how he could easily do without it, unless of course he conceived it for himself. Indeed, there is a view held by designers in and out

* *TV: the background to design*; the second article was *TV graphics* (DESIGN 141/76-81).

of television, that as television is predominantly a visual medium (a false assumption anyway), the designer (dealing in visual symbols), rather than the script writer (dealing in verbal symbols) ought to be the one to initiate and control a programme. This idea will be discussed at greater length in the next article in this series, as it affects quite a lot of critical thinking about television, and certainly the teaching of television design.

The term 'creative' in the context of television design tends to be reserved for some kind of far-out non-naturalistic setting, or perhaps no setting at all – the kind of thing that Noguchi did for *Lear* some years ago – and hardly at all for the naturalistic settings that are the background to almost all television drama productions. In fact, the television designer's talents are only partly 'formal'; what he also needs is sociological and psychological insight into character and motivation so that the sets and props fit and fill out the characters' lives and actions. When television set design falls short, it is not because the sets are not sufficiently 'visual', but because they fail to give a convincing and specific image of the environment of human actions.

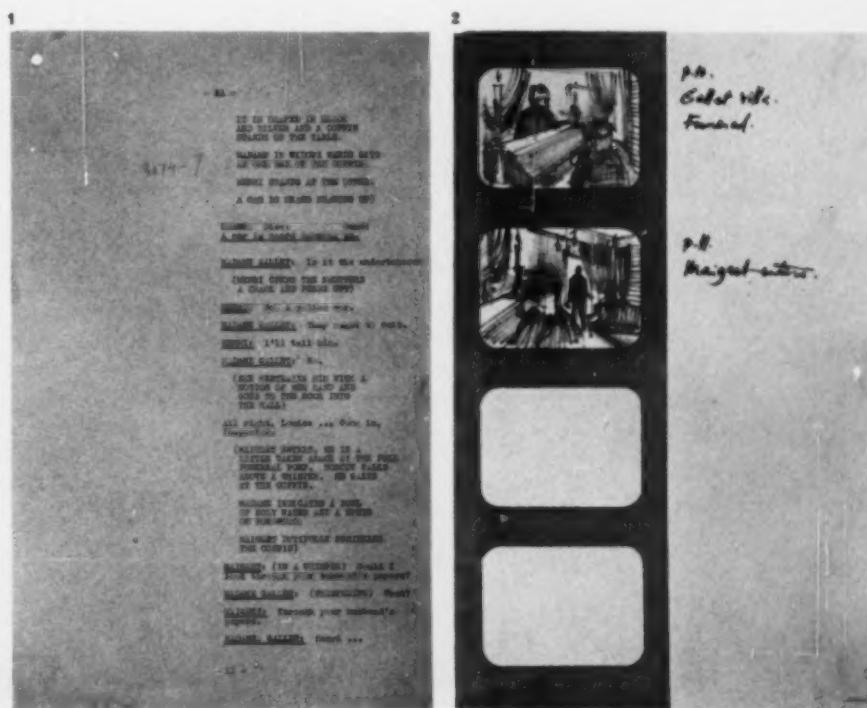
Because all television set design is thus the development of the thematic content of a programme, and because drama contains the elements of this development in a direct and undiluted form, a single drama production has been chosen to show how the designer fits into the picture of television production as a whole.

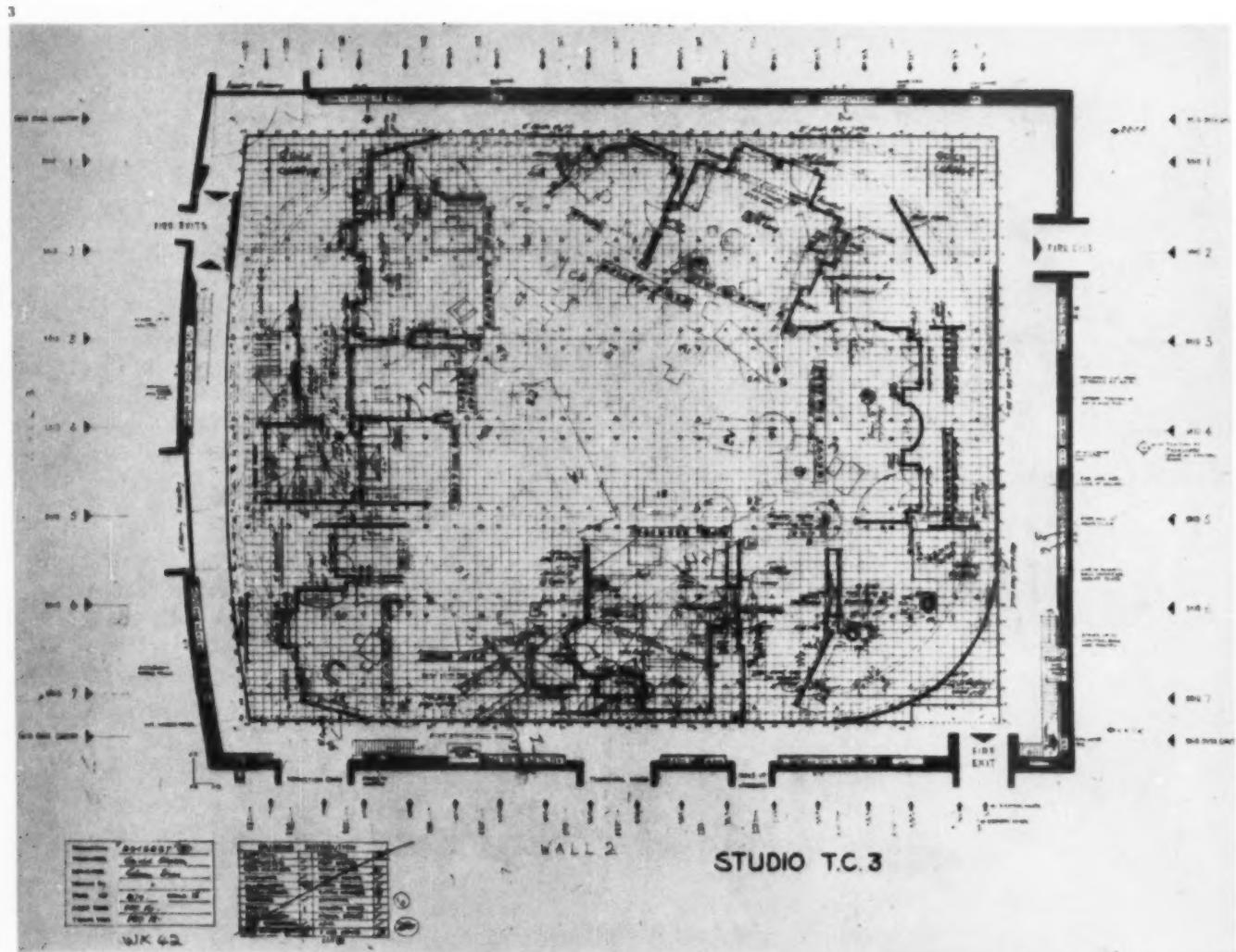
Maigret episode 7: A man of quality

SCRIPT EDITOR Giles Cooper; EXECUTIVE PRODUCER Andrew Osborn; DESIGNER Eileen Diss; PRODUCER Gerard Glaister; with Rupert Davies as Maigret and with Ewen Solon, Helen Shingler and Maurice Denham. BBC-tv; transmission December 12, 1960.

The basis of the whole operation is the script, 1, which in BBC-tv drama productions is circulated five to six weeks prior to transmission (or, as in the case of the *Maigret* series, telerecording). The designer first reads the script to get an overall conception of the drama, a general orientation to its atmosphere, period, location, its characters – the kind of people they are, their status, their relationships with each other, and their reactions to each other. This done, a more detailed reading follows during which notes are made about the kind and number of sets required and rough sketches are made to suggest the visual character of key scenes, 2. Account has to be taken of any previous location filming so that studio interiors and exteriors match up with the location shots, which are incorporated into the production during telerecording.

These general ideas are then developed into a first plan of the studio floor showing how the sets might be arranged on it. The designer checks this arrangement against the stage directions and the action in the script, making sure that there is provision for





All photographs by John Garner, except 4 by Harriet Crowder

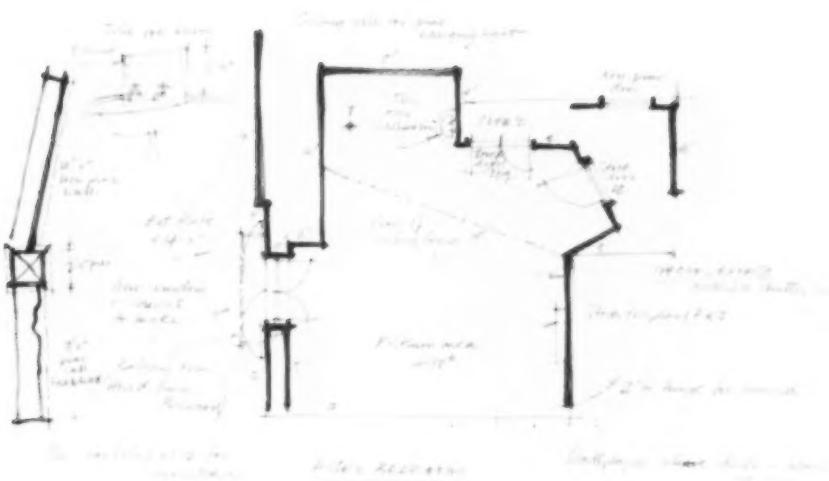
technical requirements such as entrances, exits, camera movements and so on; for instance, sets have to be positioned so that actors do not have to make impossible dashes at scene changes.

Having reached this stage the designer meets with the producer who by this time will himself have reached certain conclusions about the general handling of the story. Together they go through the script scene by scene comparing and integrating their ideas about its production and discussing not only the practical aspects of circulation, access, camera positions, etc., but also the treatment of the story in terms of the appearance of the sets, and the way they contribute to the development of character and action. It is at this stage that any fundamental disagreements between them will have to be ironed out and compromises made.

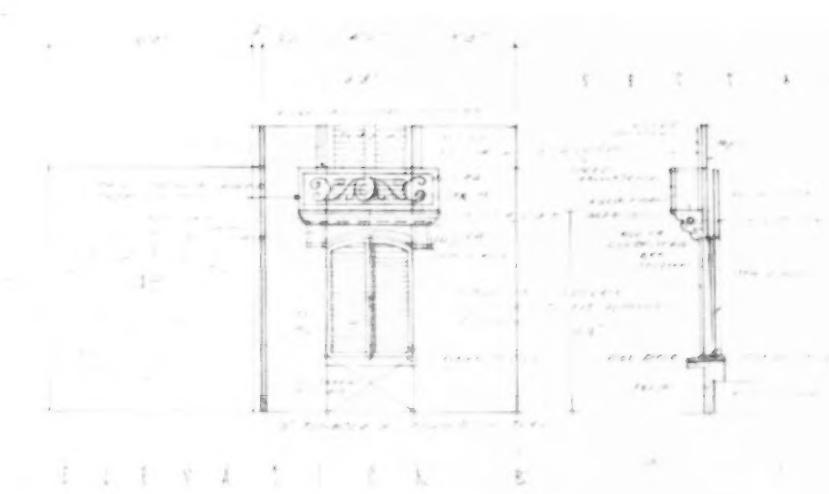
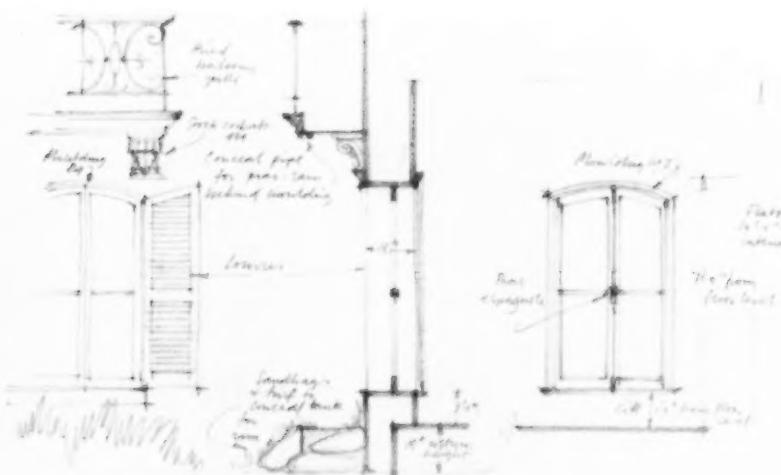
After this meeting the designer prepares a second plan, a working layout of the sets on a detailed plan of the studio floor, **3**, incorporating all the requirements—technical and thematic—that have been agreed on between himself and the producer. This plan is used as the basis for a further meeting, **4**, between the designer, *far left*, and producer, *third from left*, and this second meeting is also attended by the technical operations manager (TOM), the lighting engineer, and the production assistant (the floor manager during transmission). The technical operations manager, as his title suggests, represents the purely technical aspects of the production (other than lighting)—cameras, sound, etc. As in the first meeting, the script is gone through scene by scene and this time it is checked to see that everything that the producer and designer want to do can in fact be done. For example, the producer and designer may have conceived a shot in a way which turns out to be impractical from a technical point of view. The lighting engineer may then suggest how he *could* light the shot, and the producer and designer will restyle their original idea accordingly. When this meeting is over the programme is well on the way and most of the creative decision-making completed. The designer translates the rough plan and whatever amendments were made to it at the technical operations meeting into a final plan, with drawings and notes, **5** and **6**, from which the draughtsman prepares measured drawings, **7**. These will be used to construct the sets in the scenery block. These drawings are required by the workshops four weeks prior to transmission date, which means of course that the actual designs have to be completed in one week to a fortnight. While *Magnet 7* was being prepared, the producer, designer, etc., were in fact involved in work on subsequent episodes as well as on other programmes. The sets are generally constructed from what are virtually prefabricated components—flats, doors, windows, etc., drawn from the BBC's stock. Where no suitable stock exists new components are made,

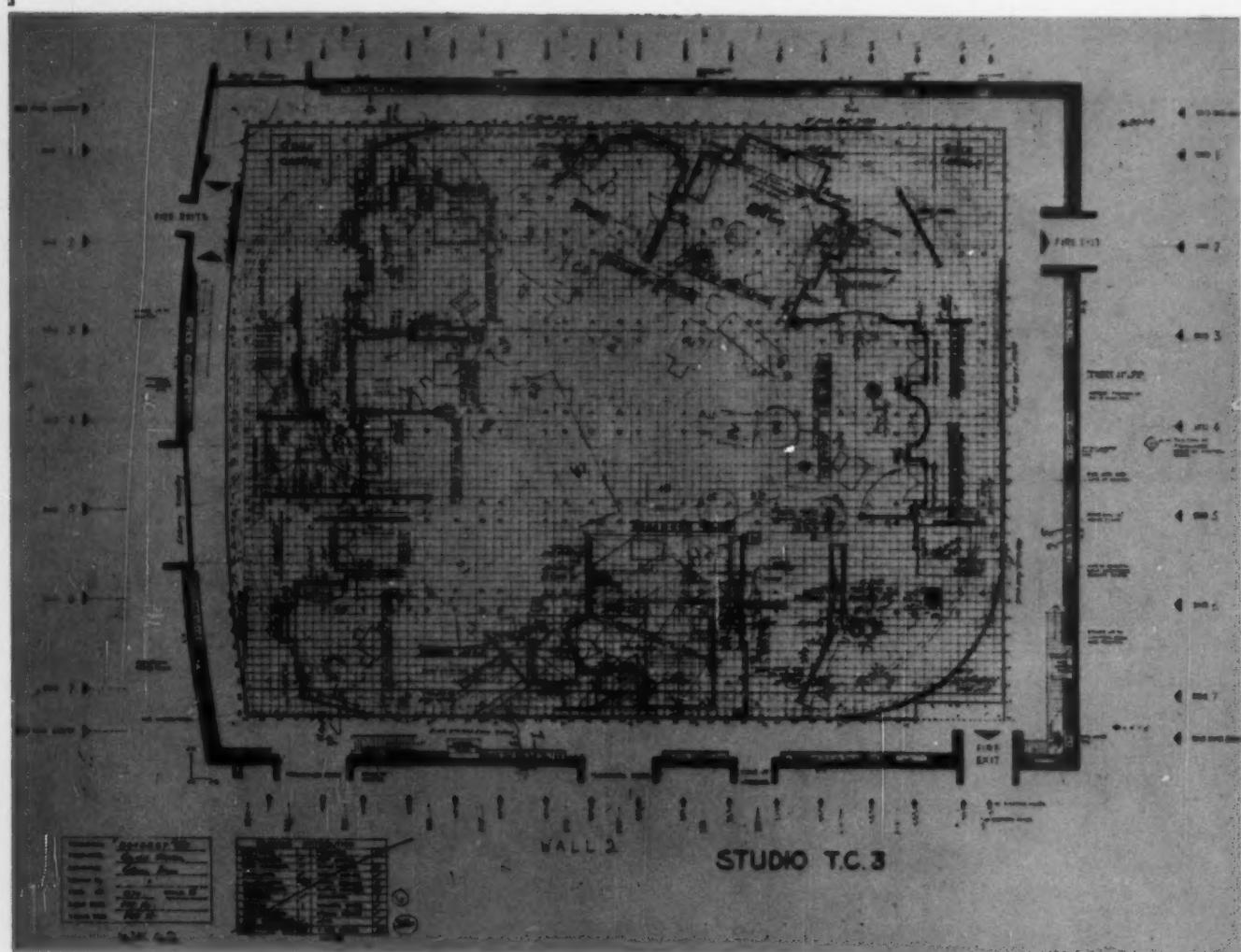
and put into stock at the end of the production. While the sets are being constructed in the workshops the designer prepares (or has already prepared) a complete list of props needed in the play. This list, called a property plot, may run into many hundreds of items from, for example, an Empire settee to a French stamp. As with the sets themselves a good many of these props will be obtained

5



6





All photographs by John Garner, except 4 by Harriet Crowder

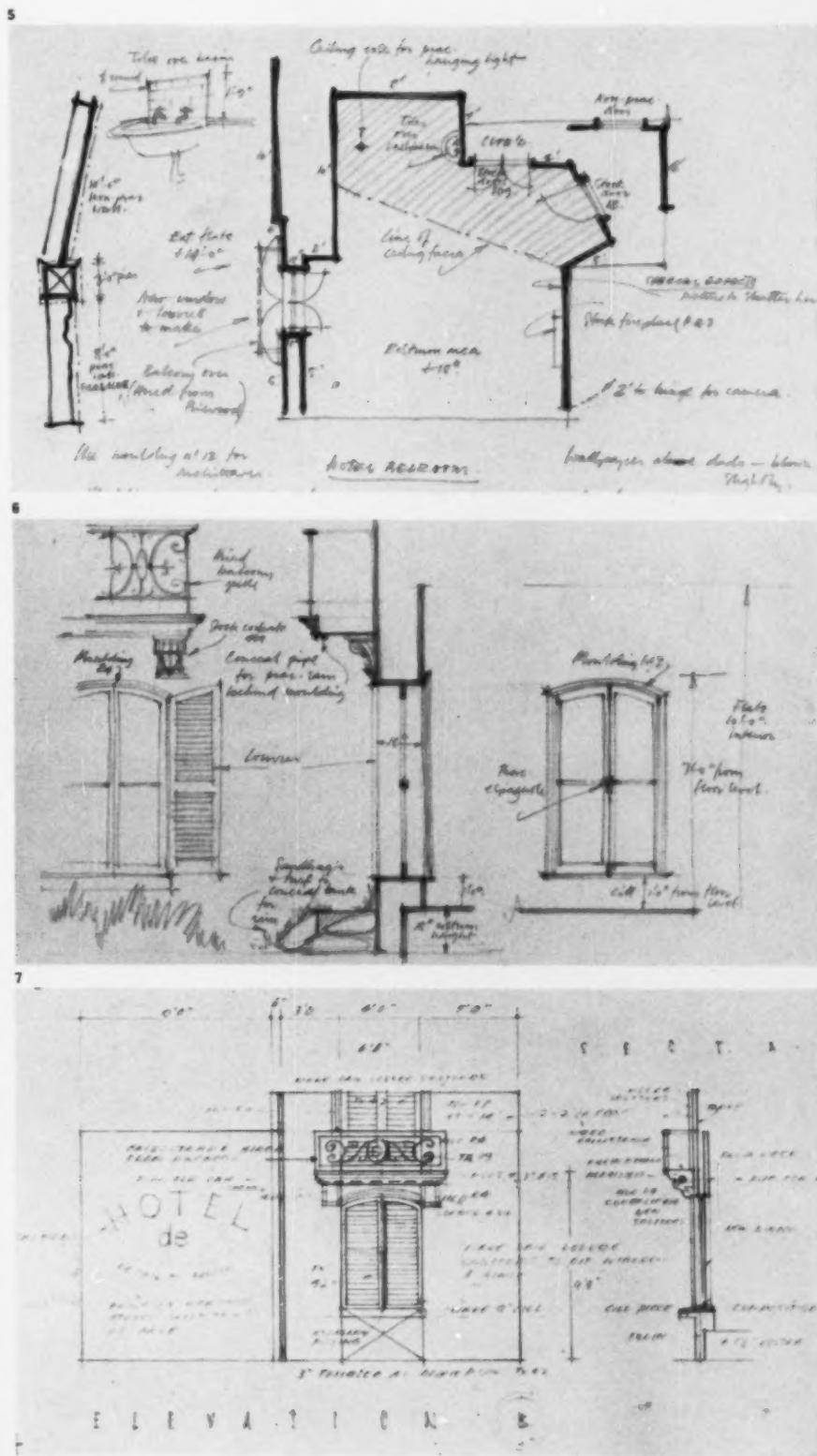
technical requirements such as entrances, exits, camera movements and so on; for instance, sets have to be positioned so that actors do not have to make impossible dashes at scene changes.

Having reached this stage the designer meets with the producer who by this time will himself have reached certain conclusions about the general handling of the story. Together they go through the script scene by scene comparing and integrating their ideas about its production and discussing not only the practical aspects of circulation, access, camera positions, etc, but also the treatment of the story in terms of the appearance of the sets, and the way they contribute to the development of character and action. It is at this stage that any fundamental disagreements between them will have to be ironed out and compromises made.

After this meeting the designer prepares a second plan, a working layout of the sets on a detailed plan of the studio floor, 3, incorporating all the requirements – technical and thematic – that have been agreed on between himself and the producer. This plan is used as the basis for a further meeting, 4, between the designer, *far left*, and producer, *third from left*, and this second meeting is also attended by the technical operations manager (TOM), the lighting engineer, and the production assistant (the floor manager during transmission). The technical operations manager, as his title suggests, represents the purely technical aspects of the production (other than lighting) – cameras, sound, etc. As in the first meeting, the script is gone through scene by scene and this time it is checked to see that everything that the producer and designer want to do can in fact be done. For example, the producer and designer may have conceived a shot in a way which turns out to be impractical from a technical point of view. The lighting engineer may then suggest how he *could* light the shot, and the producer and designer will restyle their original idea accordingly. When this meeting is over the programme is well on the way and most of the creative decision-making completed. The designer translates the rough plan and whatever amendments were made to it at the technical operations meeting into a final plan, with drawings and notes, 5 and 6, from which the draughtsman prepares measured drawings, 7. These will be used to construct the sets in the scenery block. These drawings are required by the workshops four weeks prior to transmission date, which means of course that the actual designs have to be completed in one week to a fortnight. (While *Maigret 7* was being prepared, the producer, designer, etc, were in fact involved in work on subsequent episodes as well as on other programmes.)

The sets are generally constructed from what are virtually prefabricated components - flats, doors, windows, etc, drawn from the BBC's stock. Where no suitable stock exists new components are made, and put into stock at the end of the production.

While the sets are being constructed in the workshops the designer prepares (or has already prepared) a complete list of props needed in the play. This list, called a property plot, may run into many hundreds of items from, for example, an Empire settee to a French stamp. As with the sets themselves a good many of these props will be obtained





from the BBC's stock. Those that are not available are bought, hired or made in the workshops.

The completed sets, 8 and 9, are built in the studio two days before telerecording. Once the sets are up, they are dressed by the designer, 10, and the production is ready for camera rehearsals (the equivalent to dress rehearsals in the theatre), 11, 12 and 13. Camera rehearsals for *Maigret 7* took two days and the programme telerecorded at the end of the second day. The producer conducts the camera rehearsal and the telerecording itself through monitor screens in a control box isolated from the studio floor, 14, 15. He is in communication with the studio through the floor manager who passes his instructions to the actors; the camera men too are in direct contact with the producer through headsets. In the control box with the producer and his secretary is the technical operations manager, a girl from the make-up department and the designer. The sound and electronic engineers are in an adjacent room.

It is not until the sets and actors are seen together through the monitors, as they will be seen by the viewers, that the final adjustments can be made. A piece of furniture may have to be moved to give an actor an easier or more natural movement, the tone or colour of a prop may have to be changed or the lighting modified.

Eileen Diss, the designer, works free lance for the BBC. She is 29, and studied theatre design at the LCC Central School of Arts and Crafts. She joined the BBC in 1952 as assistant designer, and was appointed designer in 1955, working on a variety of programmes - drama, light entertainment, talks, ballet, etc. She is married and has two children, and decided to work free lance in order to spend more time at home. Programmes she has worked on include Shaw's *The Applecart*, and *Man and Superman*, T. S. Eliot's *The Elder Statesman*, and *The Railway Children*, a children's unit serial.

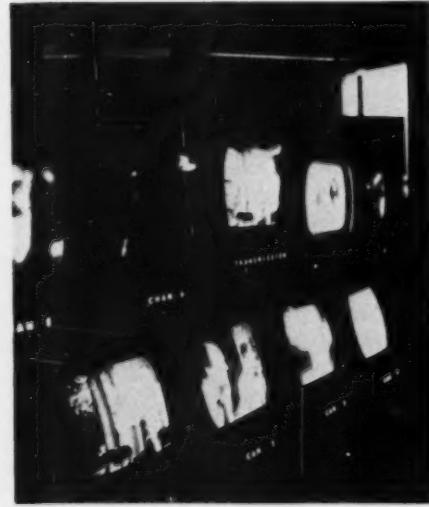
13



15



14



The detailed planning and hard work which go into the construction of a setting



While this account is based on the production of one programme by one company, it can serve as a more or less general picture of the designer's role in television. For example, all designers, no matter what type of programme they are designing for, must base their work on some kind of thematic framework – a script, an agreed progression of ideas for discussion, or merely a situation. In short, all designers are specialists in the creation of environments for some given action. The relationship, too, between producer and designer is, on paper at least, much the same everywhere, although in practice it will obviously be affected by the personalities of the people involved. If he cares to use them, there are ample channels through which the designer can influence the character of a production, other than by providing the sets. But in the last analysis the translation of the script into a unity of moving image and sound is the responsibility of the producer, just as in the movies it is the responsibility of the director.

However, the very best producer is faced with limitations that at the moment seem to be built in to television as a medium. Tele-

vision drama is particularly hard hit by these limitations, and it also suffers from them in relation to the 'sight and sound' precedent of the movies. The sort of effects the movies can accomplish with comparative ease are practically impossible given the conditions under which television is produced. Let us look at two of the limitations that have a profound effect on the treatment of a story – scale and lighting. Scale does not merely involve the size of the tube, but the relationship between sets, cameras and actors on the studio floor. In nine drama productions out of 10 this relationship tends towards the straight line; it is as though the viewer is looking into a room full of people through a choice of four keyholes; he can see people as they pass in front of the keyholes, but he rarely gets into the room as one can in the movies. The effect of this sort of constraint on the viewer's imagination plays havoc with his sense of geography. There is little opportunity to orientate oneself within one set, let alone from one to another, and consequently there is an evenness in the transition from one scene to the next, so that a police headquarters tends to look like a junkie's pad, and *vice versa*.

and its careful relation to the script

often end up as a keyhole view

TIBURCE: ... a very pleasant dry mousseux, Inspector, bottled on the estate from my own vines. (HE OPENS THE BOTTLE AND POURS) I'm sure you will appreciate it.



MAIGRET: This is excellent.

TIBURCE: I knew your taste would be the same as mine the moment I saw you. One can always tell a fellow connoisseur ... (HE LAUGHS)



This lack of differentiation is emphasised by an evenness in lighting, which gives the impression that the purpose of television lighting is to communicate exactly equal (and maximum) information about each set. Admittedly lighting is a real problem to the television designer, as the limits inside which lighting for effect can operate would seem to be a matter of a few watts. Television (even telerecording) is shot in sequence, so the amount of adjustment that can be made from one shot to the next is obviously limited. In the movies, on the other hand, the director can light for one shot, break off, change the lighting and shoot again.

While criticism has to take these restrictions into account, they can and in fact are being sanctified into an aesthetic, or at least ritualised into television operational lore, where they become immune to change even when technical developments make that change possible. The fact that some of the most unsatisfactory aspects of television can be attributed to technical limitations suggests that a great deal of the material it uses is frankly unsuitable. This in turn suggests that either more suitable material ought to be

found, or the limitations themselves cut down. Truth to material strategies (the former of these two alternatives) have always tended to reinforce the exclusiveness of an art form and reduce its chances of development - a kind of progressive way of standing still. On the other hand, technical limitations could be overcome over night. The future of television would seem to depend on directing technical development to encompass specific aesthetic needs.

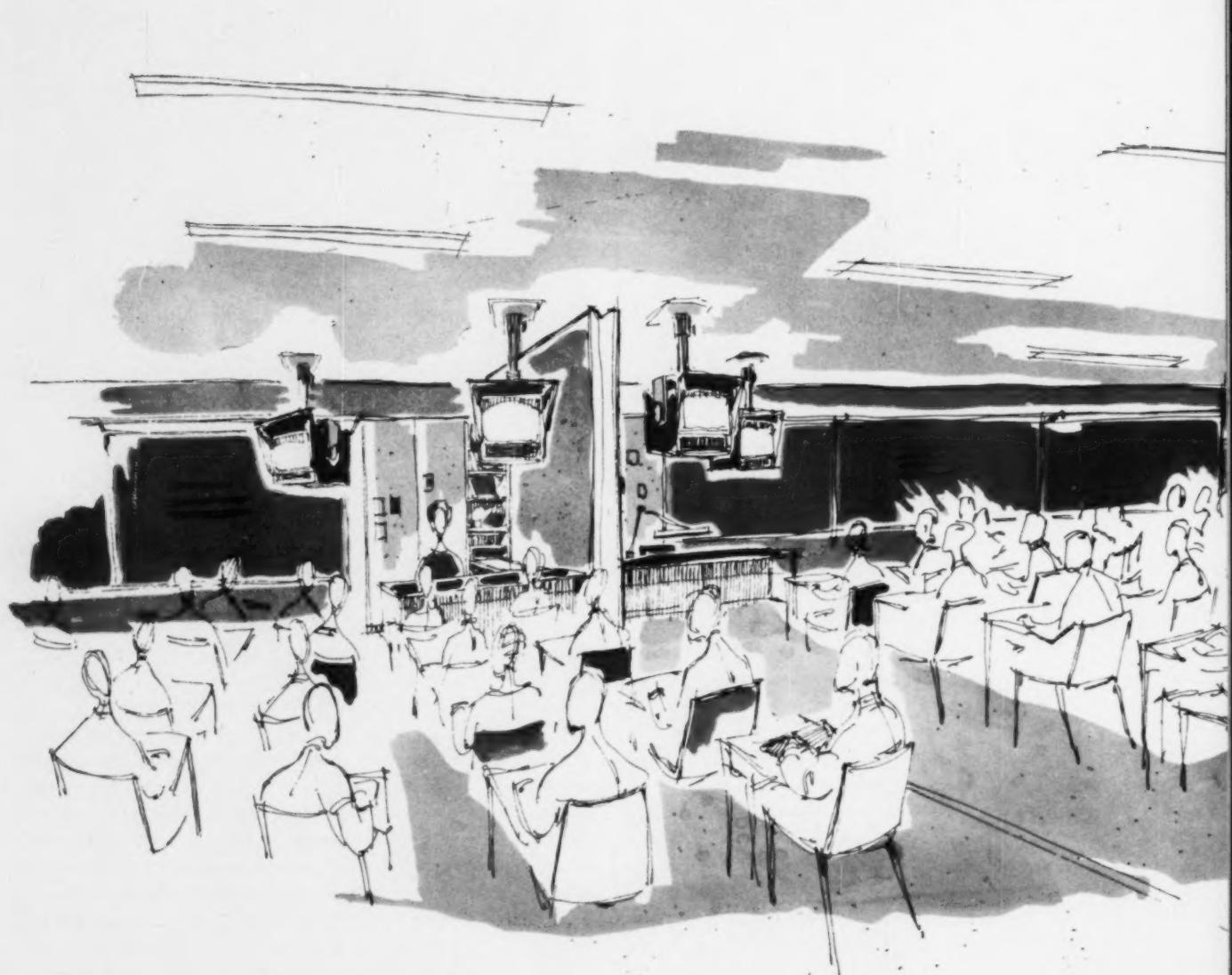
In this article a few of the problems that face television production have been touched upon. In the concluding article in this series these same problems will be reviewed in greater detail within the wider context of design for television. However, it will not be proposed that designers should inherit any more of the earth under the studio roof than they have already, nor that as a visual medium (too naive a definition to do any good) television is merely awaiting its Norman McLaren or its Bert Stern. The article will attempt to suggest those areas in which visually oriented skills might be of considerable help in leading technical development to where it can be put to effective use.

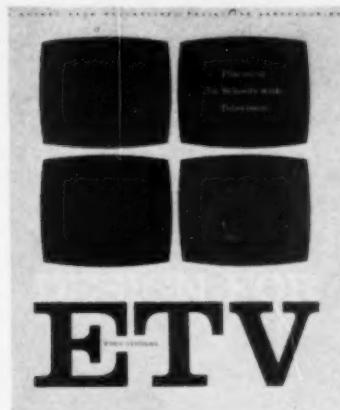


New approach to school planning

J. CHRISTOPHER JONES *Industrial Design Ergonomics Laboratory, AEI (Manchester) Ltd*

The following review of a report entitled Planning for Schools with Television by Dave Chapman Inc is an example of a new and extended conception of industrial design that is gaining acceptance in the USA and promises to make industrial design of much greater value to users and to the community. Dave Chapman, Kim Yamasaki and Frank Carioti, who prepared the report for Educational Facilities Laboratories of the Ford Foundation, received an award for their work from the American Industrial Designers' Institute.





2 The cover of the report



1 One of the sketches from the report showing a suggested classroom arrangement. A folding room divider allows different sized rooms with minimum reshuffling of furniture.

"It was a question of arranging things and people, and so we turned to an industrial design firm on the grounds that this was their business." This is the reason given by the Educational Facilities Laboratory of the Ford Foundation for consulting Dave Chapman Inc on the effects of educational television on the design of schools, classrooms and teaching equipment. That this question was put to industrial designers rather than to architects, educationists, TV engineers, psychologists, or some combination thereof, shows how far American industrial design is extending its responsibilities from styling and appearance towards the overall planning of all ergonomic and technical factors in the design of equipment and environment for human use.

The report reviewed here, *Planning for Schools with Television*, does not include very much, or very rigorous, research into the behaviour of teachers and pupils in schools using television. To that extent it is not the sort of study we would expect from a purely ergonomic and scientific investigation. But it does have two characteristics which are very much the speciality of an industrial designer: a, an extremely wide and overall survey of the problem; and b, a clear and easily understood presentation of the results. This generality of conception and clarity of presentation are the two qualities most necessary to, and yet most lacking in, the confusion of haphazard specialisation which prevails in all branches of modern life today. It seems that the industrial designer, for all his superficiality and pre-occupation with appearances (or perhaps because of this), is the only person whose training and experience lead away from confusion, speciality and incoherence, towards clarity, generality and the ability to accept, explain and understand the modern world.

For these reasons we should applaud this and other pioneer attempts by industrial designers to extend their scope into the fields of ergonomics and technology and the general interpretation of modern life. For they bring to these specialities an outlook and ability to organize, communicate and apply, that are not characteristic of technologists, ergonomists or any other specialist group. The

over-simplifications and lack of scientific method which may at first be seen when industrial designers enter these fields should not disqualify them but should emphasise the need for the teaching of human and physical sciences to all students of industrial design so that the designers of the future will be fully equipped to collaborate with and co-ordinate the ergonomic and technical developments out of which the modern world is being formed.

The study included a small amount of experimental work in determining sight lines and seating arrangements when using television sets of various sizes placed at varying distances. In addition some trials of sound transmission loss were carried out for a new kind of acoustic curtain room divider devised by the investigators. But most of the findings are the result of discussions with those who have experienced the problems concerned as teachers, television engineers, educational planners, architects, experts in lighting, ventilating and acoustics. There was also some study of the numbers of pupils enrolled and teachers available over recent years, and estimates were made of the possible figures in the near future.

The study seems to have begun with little or no precise statement of aims by the sponsors, and the industrial designers were probably encouraged to widen the scope of their investigation as much as they wished. The initial question was: "Will the use of television in education impose any special design requirements on the spaces within which the teaching of future schools will take place?" The research team seems to have realised quite soon that the answer to that question is "No" (largely because TV screens are bright enough to be seen in indoor daylight); and that, in any case, this was the wrong question to ask. The absence of strict terms of reference permitted them to take a much more general view and to seek the answer to a newer and much more fundamental question: "What is the educational function the school facility must support?" Or, in more ordinary language, how will tomorrow's pupils be taught?

The ease, enthusiasm and skill with which the industrial designers sought (and to a considerable extent seem to



have found) the answer to so controversial and important a question in a field where they themselves were inexperienced, is the most striking thing about the report and the best possible recommendation for the method.

Their ability to understand, explain and clarify any situation by seeking only *formal* similarities, comparisons and links in all kinds of phenomena, be they scientific or artistic, logical or intuitive, traditional or new, sacrosanct or disreputable, is the real basis of this approach and the essential quality that the industrial designer carries over from a professional familiarity with these characteristics in modern art.

The most valuable part of the report is the first section in which the numbers of pupils and teachers, and the methods of teaching over the next few years, are presented with great clarity and simplicity.

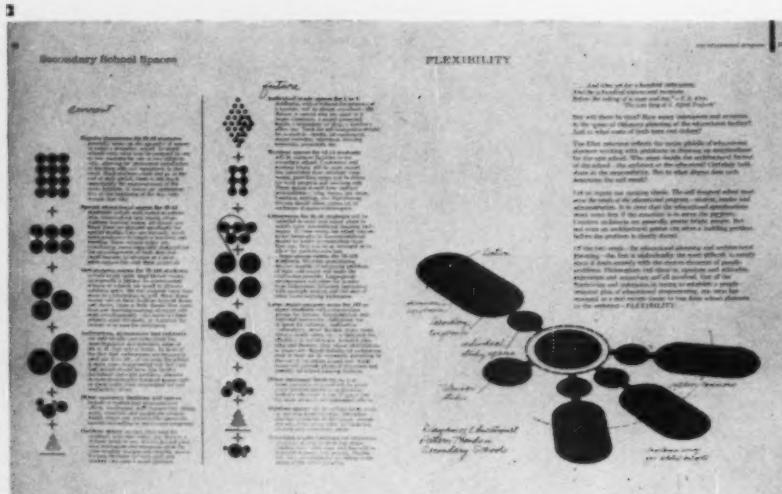
From a mass of conflicting opinions, experiences and statistics, they have extracted a few dominant trends and factors that seem certain to call for a complete reorganisation of the US teaching system if future educational requirements are to be met. This situation is described in simple arrangements of words and pictures. An example is 3, which shows how teaching methods change according

to the numbers of pupils and teachers.

An overall conclusion from these general findings is that the overriding requirement in school planning is for *flexibility*. This is interpreted in a section on classroom layouts which permit the re-arrangement of pupils in groups ranging in size from one to 500 for varying purposes, 1, 4, 5 and 6. It has also led to the development of an acoustic curtain for space dividing, 8 and 9, and flexible seating arrangements.

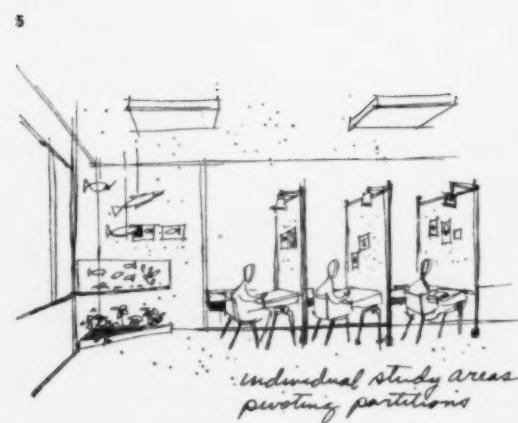
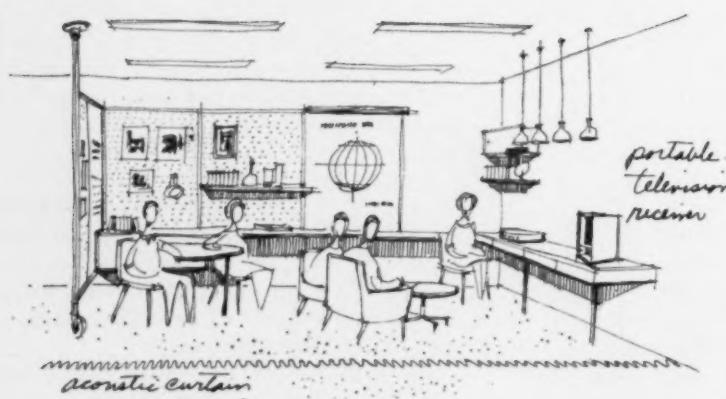
Provisions necessary for TV and other visual aids which are expected to be much used in the future, are explained with such examples and sketches as a teachers' centre, 7, classroom TV mountings, 12, and illustrations showing the number of viewers for varying screen sizes and seating arrangements, 10.

Recommendations are based on simple trials, as illustrated in 11, and do not take into account such factors as the discomforts of restricting eye movements by the use of relatively small screens or the sight of more than one screen from one seating position. It is in such incompleteness and over-simplification of detailed investigation that the industrial designer has most to learn from ergonomists and is most in need of scientific training.

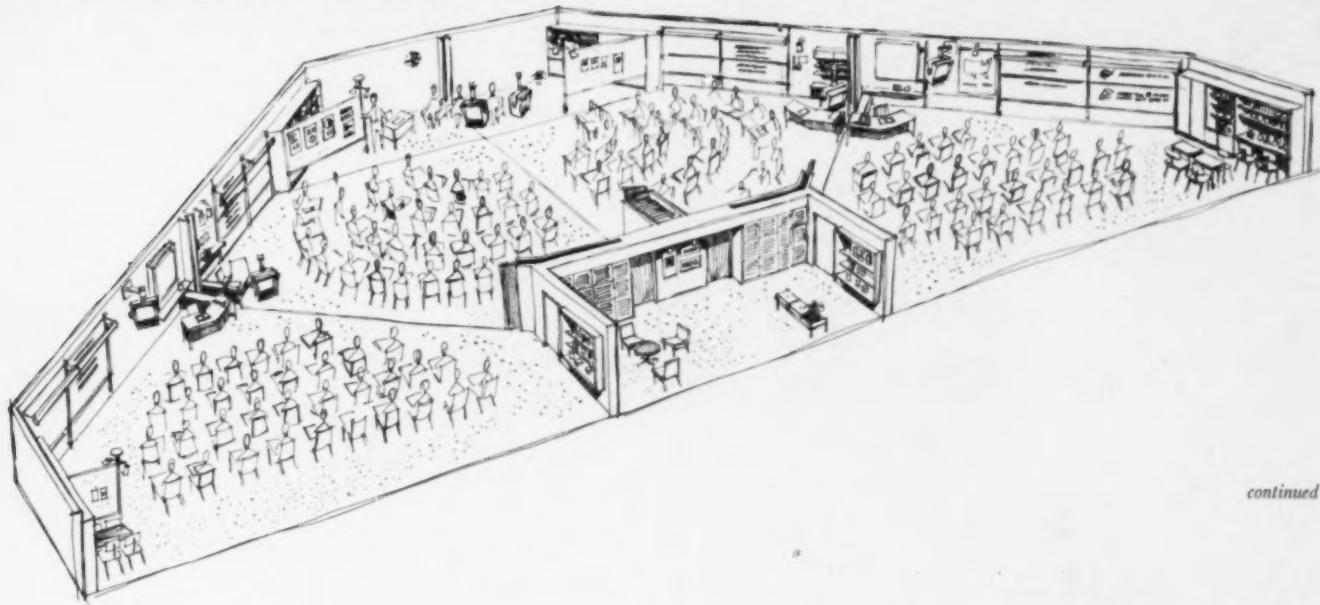


3 A typical spread from the report. Diagrams and sketches in colour are used extensively to clarify and enliven the presentation.

4 and 5 Movable screens are an important part of the recommendations. 4 shows small areas for groups of up to six pupils. 5 shows how pivoting screens provide private study areas.

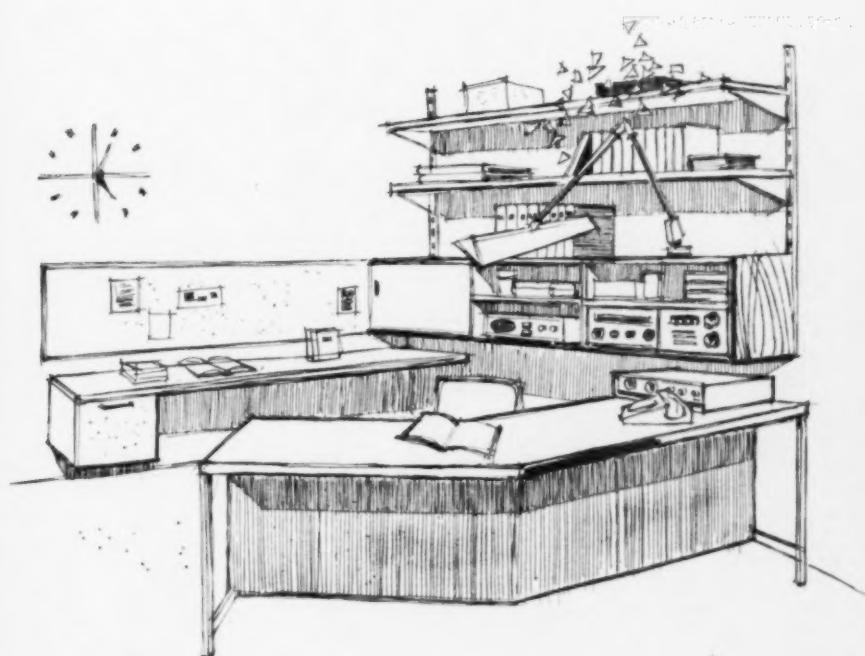


6 Arrangement providing class space for up to 200 pupils.

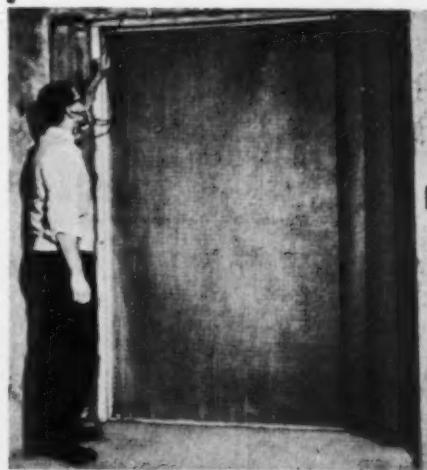


continued

8 and 9 A new type of acoustic curtain space divider, developed by Dave Chapman Inc, is tested for sound transmission loss at Riverbank Acoustical Laboratories.



7 The teacher's centre in future schools will be more than a desk and chair. This unit would include storage space and controls for television, lighting, partitioning devices, intercom, etc.



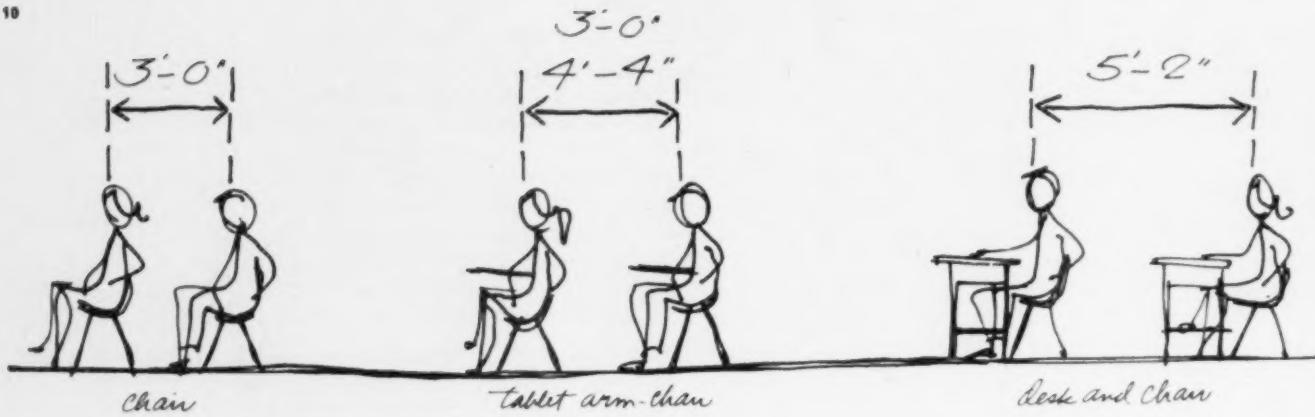


10 Chart and sketches showing number of viewers capable of watching a single screen depending on such factors as screen size, type of furniture used, etc.

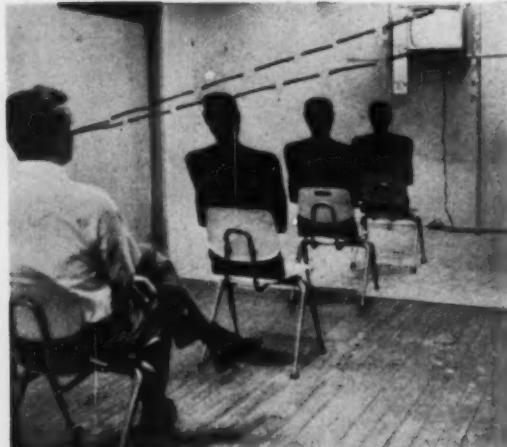
Number of viewers

Size of television tube	17"	19"	21"	23"	24"
Chair 3' 0" spacing	32-34	36-38	52-54	54-56	64-72
Tablet arm-chair 3' 0" spacing	21	22	31	31	39
Tablet arm-chair 4' 4" spacing	20-23	20-26	31-36	36-38	41-52
Desk and chair 5' 2" spacing	16-18	20-21	24-29	24-29	33-34

10



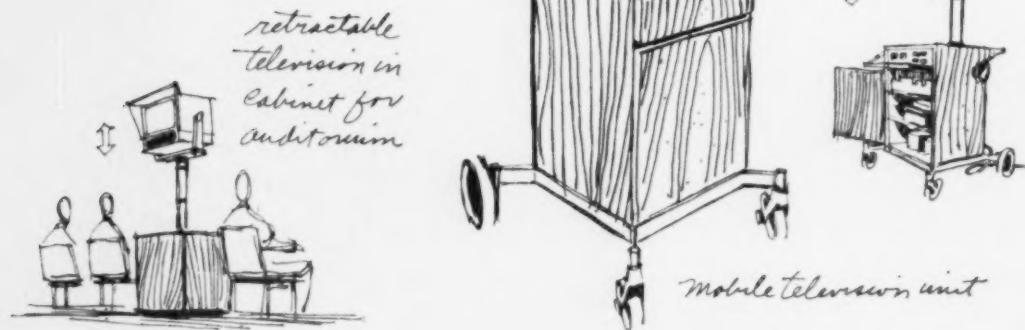
11



11 Trials were carried out to determine optimum arrangements of seating in relation to the TV screen.

12 The report suggests a variety of methods for mounting the television receivers.

12





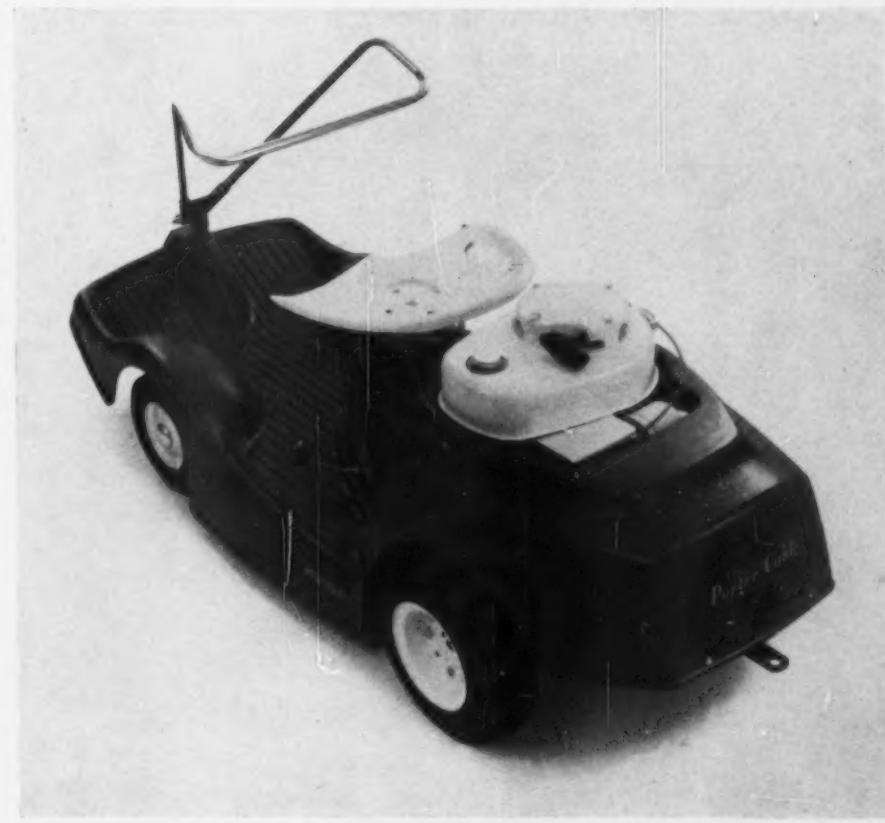
Japan: motor coach

Travellers in Japan seem particularly well looked after. This coach, recently introduced for long distance journeys and sightseeing tours, is equipped with an air conditioning system, and indirect lighting is provided by fluorescent tubes in the roof with local illumination from spot lights fixed to the upper frames of the windows. A luxury rarely known in

Britain is the adjustable reclining seats. At the rear of the coach is a kitchen. While the exterior shape avoids many of the clichés current in European motor coach designs, the softly rounded forms seem to be a throwback to the aerodynamic styling of pre-war. DESIGNER Tatsuzo Sasaki. MAKER Nishi Nihon Tetsudo KK (West Japan Railway Co Ltd).

USA: motor mower

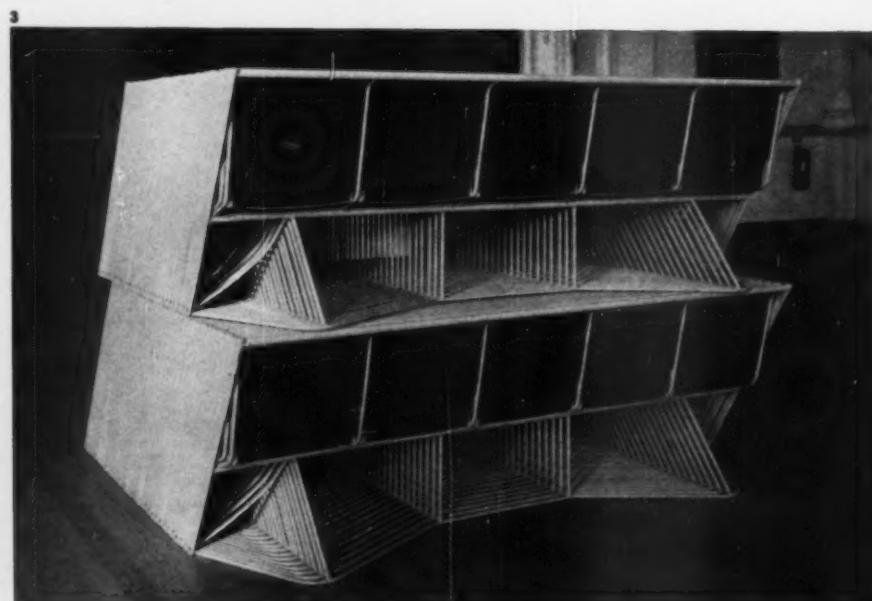
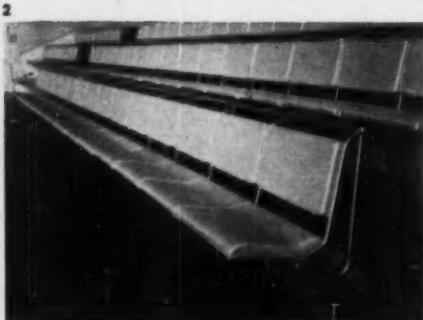
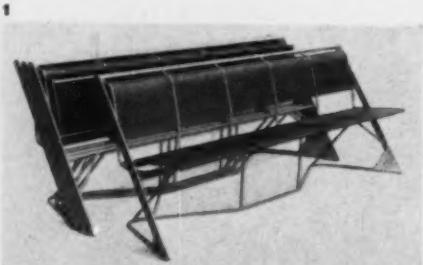
In designing the *Mk24* motor mower The Porter-Cable Machine Co attempted to set a new standard in such machines. The company's aim was to produce a machine differing from the predominating 'tin lizzy' stage of motor mower designs by integrating the many parts to produce a vehicle of improved function, ease of operation and greater safety. Advantage has been taken of a monocoque construction, the one-piece moulded aluminium chassis serving as main frame, footrest, wheel housings, support for front axle and steering post, and cutter blade housing. This system is said to avoid the need for over 50 extra parts. The rear assembly consists of rear wheels, engine and a glass fibre shroud. An unusual feature of this design is the inclusion of a differential between the rear wheels to minimise any gouging of the lawn when turning. DESIGNERS Arthur Pulos together with Joseph Kieffer and Richard Lamkin of the firm's staff. MAKER The Porter-Cable Machine Co.





Ghana: furniture

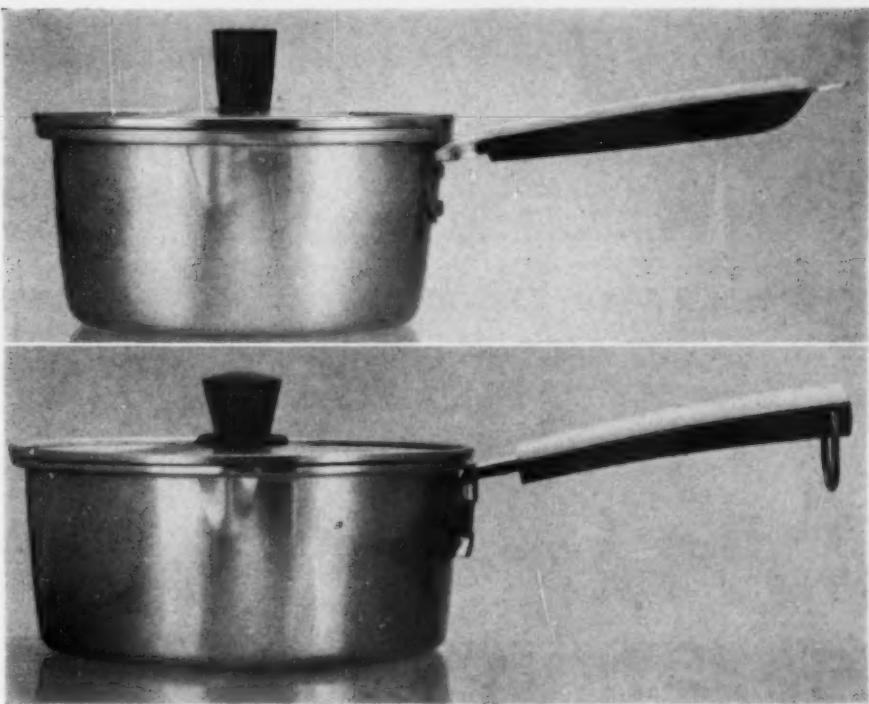
These two chairs have been designed for use in the new school of architecture in Kumasi, Ghana. The armchair is in mahogany, wax polished and ebonised, with foam plastic cushions resting on Pirelli rubber webbing. The other chair is also in mahogany either wax polished or ebonised; the cane seat is removable. This design is intended for general purpose use throughout the school. Both designs are made by the general contractor for the new building, F. Micheletti & Co. DESIGNER Miles Danby.



Australia: stacking chairs

An original solution to the problem of designing individual and multiple unit stacking chairs is shown in these illustrations of an Australian model. The maker first produced a standard unit as long ago as 1951, to the basic principle invented by the late Bill Oysten. Developments have progressed over the years and several models are now available with various types of upholstery. One of the main advantages of the designs is that, while some nesting furniture needs to be lifted for stacking, the Tierstack units nest into one another. 3 shows 300 five-seat units neatly stacked. 1 illustrates how the units, available with either three, four or five seats, slide

together and it is said that each additional unit occupies only 2½ inches of floor space. Each unit has a hole in the main left hand leg and a connecting stud in the right so that rows can be maintained straight and unbroken. The company also manufactures matching individual units which were produced primarily to meet a demand for church seating. Since beginning the manufacture of seating the firm has rapidly expanded, and, in addition to its nesting models, also makes fixed units, such as those in 2. For the last three years, Grant Featherston has worked with the firm as designer. MAKER Tierstack Seating Pty Ltd.



Japan: saucepans

The introduction of a range of alumite saucepans which set new standards of design for Japanese kitchen utensils has resulted in increased sales for the maker. Designs were undertaken by TAT, a design group comprising Teruyoshi Murakami, Atsushi Chiku and Takashi Matsumura. The wide handle shapes seem well suited to the user and the radii at the bottom of the pans appear large enough to permit easy cleaning, but the same may not apply to the rolled edges and radii of the lids. DESIGNER TAT. MAKER Sanko Kinzoku Kogyo Co Ltd.

EVENTS OVERSEAS



Harold Barnett



George Nelson

One new design office . . .

Harold Barnett, who for some years was managing director of Raymond Loewy's design office in Paris, Compagnie de l'Esthétique Industrielle (DESIGN 128/53-54), has recently left the organisation to form his own design office. Known as Design pour le Commerce et l'Industrie, the firm will cover many aspects of industrial, graphic and interior design throughout Europe and the UK. Recently Mr Barnett said that with closer economic ties in Europe, American design offices may soon be needing someone on the spot to do a "servicing job".

... and another

George Nelson may soon be setting up a design office in Europe. Plans are not yet advanced sufficiently to detail the type of office or work envisaged. In America the company is currently engaged in such diverse activities as the design of a New York restaurant, film titles and credits for a Marilyn Monroe film and a "complete visual identity programme for Abbott Laboratories, including everything from redesign of package labels to new plant design".

'Down under' design group

A group of architects, solicitors, designers and engineers has recently founded the Design Association of New Zealand (DANZ). In a booklet setting out the aims of the organisation DANZ believes that

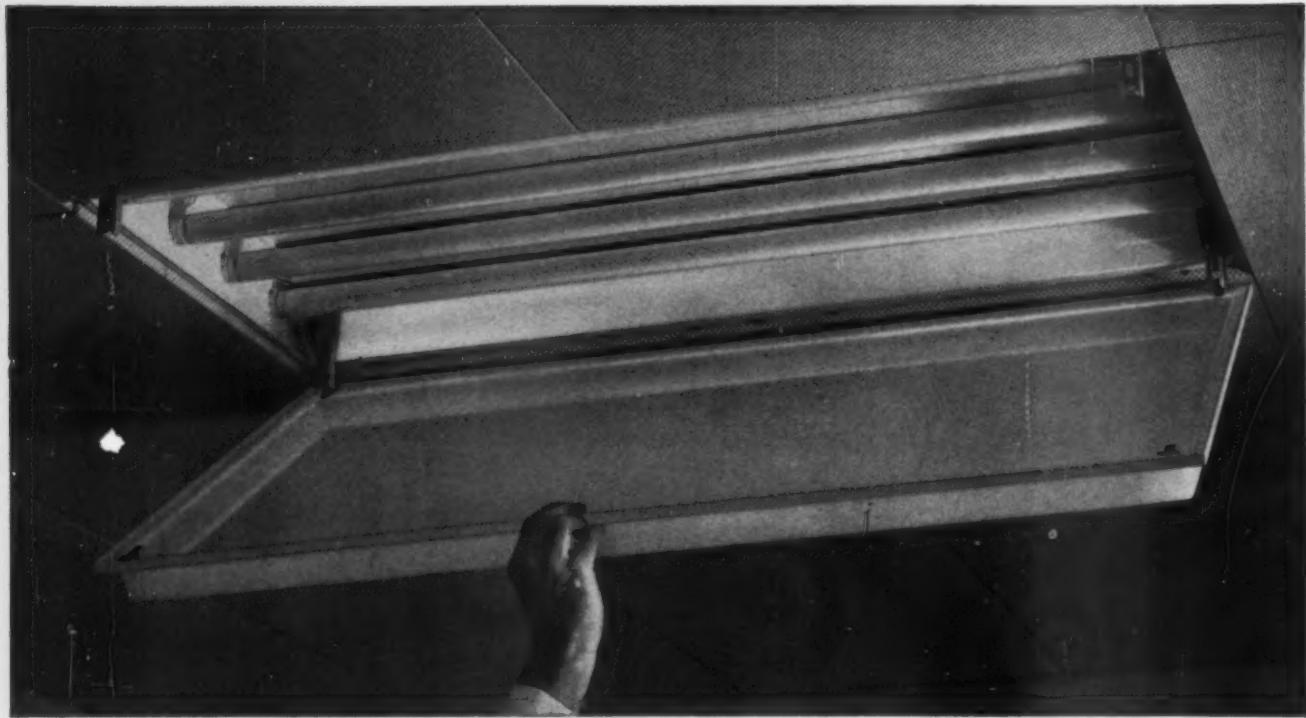
"New Zealand needs now a properly constituted organisation, supported by public funds, able to develop design throughout the country. This body must be independent and non profit making and have a fully trained and qualified staff headed by a director appointed by a National Advisory Council". This would include representatives from consumers, manufacturers, distributors, the design profession, government and others. It is suggested that a design centre be set up in Wellington with regional advisory councils in other cities to help service all sections of the community.

Roger Lascelles, who is DESIGN's New Zealand correspondent, has been a driving force in setting up DANZ. He is now secretary of the organisation having returned to New Zealand after a world tour.

London to see US

In the spring of this year the US is to open a trade centre in London. The first permanent, Government sponsored trade promotion headquarters of its kind to be established outside the US, the centre exhibits will be based on a series of themes highlighting categories of best selling American goods. It is said that Britain's removal of many import restrictions on dollar goods has contributed to expansion of American trade, which the centre will continue to foster. Perhaps, with the increase in European economic co-operation other countries may soon be following suit.

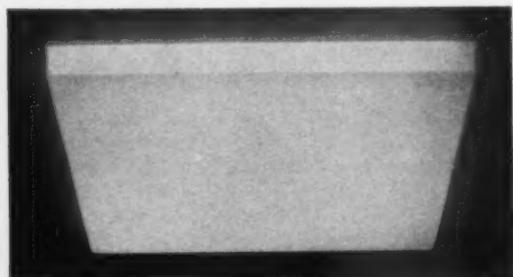
ALLOM
HEFFER
AND COMPANY LIMITED



The recessed fittings illustrated are made in various sizes and incorporate a completely new method of securing simple maintenance by means of the Allom Heffer patent locking device (Patent application No. 32933/59) which provides:

- A positive method of opening and shutting on a pull-push principle.
- Hinging on either side of the fitting when fully clear of the ceiling.
- Complete detachment of the diffuser when required.

Apply for Brochure series 707



17 MONTPELIER STREET • KNIGHTSBRIDGE • LONDON • SW7 • TELEPHONE KNIGHTSBRIDGE 6897-8

FACE VALUE

A recent range of colonial stamps suggests that new ideas may at last prevail in this neglected field of design.

After four and a half years, a few comforting signs of change are apparent in the techniques of British 'colonial' stamp design. Then, the outlook was bleak; today, however, pressure is forcing changes on the old point of view.

The sales to collectors of colonial stamps (to use the convenient term for describing those issues produced under the auspices of the Crown Agents for Overseas Governments and Administrations) have shown a steady decline, and are now running at about 50,000 - 70,000 series per issue. But since the philatelic market is the most directly profitable part of the stamp issue operation and, indeed, the one which has given impetus to the entire change of policy, it is worth examining more closely.

It is estimated that between 25 and 5 million stamp collectors are prepared to spend money on their hobby, the majority of them in the USA, Great Britain, and Western Europe. To supply this market, virtually every government in the world - and particularly in the Communist nations - is making great efforts to achieve the production of well designed and beautifully printed stamps. These, after being paid for at full face value, will go into the collectors' albums; and the issuing administration needs to perform no service save the production of the item, whose 'value' ranges between 1d and £1. In this flood - an estimated 5,000 new designs are produced each year - British colonial stamps have failed to hold their existing markets. In particular, the establishment in the USA of philatelic sales agencies who produce and market for several territories colourful issues previously handled via London (Ghana, Maldives, Nigeria) made it necessary to provide a market and design service at least equivalent to that offered by America.

The Kenya - Uganda - Tanganyika Series

The choice of subjects has been carefully made. In the small-size cent values, the limited space below the Royal portrait and marginal inscription is filled with vignettes of local produce and fauna. For the middle values (shilling denominations) we have the familiar formula of portrait-and-landscape. The portrait remains one of the stock photos 'as

The method of obtaining stamp designs largely remains - as it must - in the hands of local postal and other officials whose suggestions, however, still have to be translated into a graphically and philatelically acceptable conception. One of the methods used is the open competition whose details are published in the Crown Agents' *Stamp Bulletin*. But when these details are circulated to artistic advisory bodies, they sometimes meet with a hostile response. The Society of Industrial Artists, for instance, objects to them on these grounds: the names of the assessors are not mentioned; the fees offered are sometimes ridiculously low; and excessively restrictive conditions are stipulated. But even were the assessors' names published, they would probably be unacceptable, as no qualified judge could be found in the more remote territories.

For these and other reasons, the Crown Agents themselves are far from convinced that this method is the best. They prefer the direct commissioning of a specified artist, who has the task of shaping the entire series (the method adopted in Paris for the parallel issues of the French community).

At the same time, artwork costs must remain reasonable; and one result of the cost factor, coupled with the ever-decreasing production times demanded, is a trend toward photogravure and multichrome litho-offset production at the expense of the once almost universally line-engraved stamps. In fact, steelplate engraving tends to be more restricted to those countries where facilities for especially rapid production by this process exist, or to stamps of values higher than 1s issued at relatively infrequent intervals when the quality 'feel' of an engraving is sometimes psychologically important.

A particularly good example of the progress made

is demonstrated by the new series for Kenya-Uganda-Tanganyika, designed by Michael Goaman. Mr Goaman was introduced to the GPO by the CoID Record of Designers, and the CoID and GPO were subsequently jointly responsible for recommending him to the Crown Agents; so that for the very first time a qualified artist has been entrusted with the design of a complete series. The low denominations correspond in size with the normal British issues, and demonstrate convincingly that, in spite of all previous protestations on the part of the British postal authorities, it is possible in this format to unite the royal portrait with a pictorial subject.

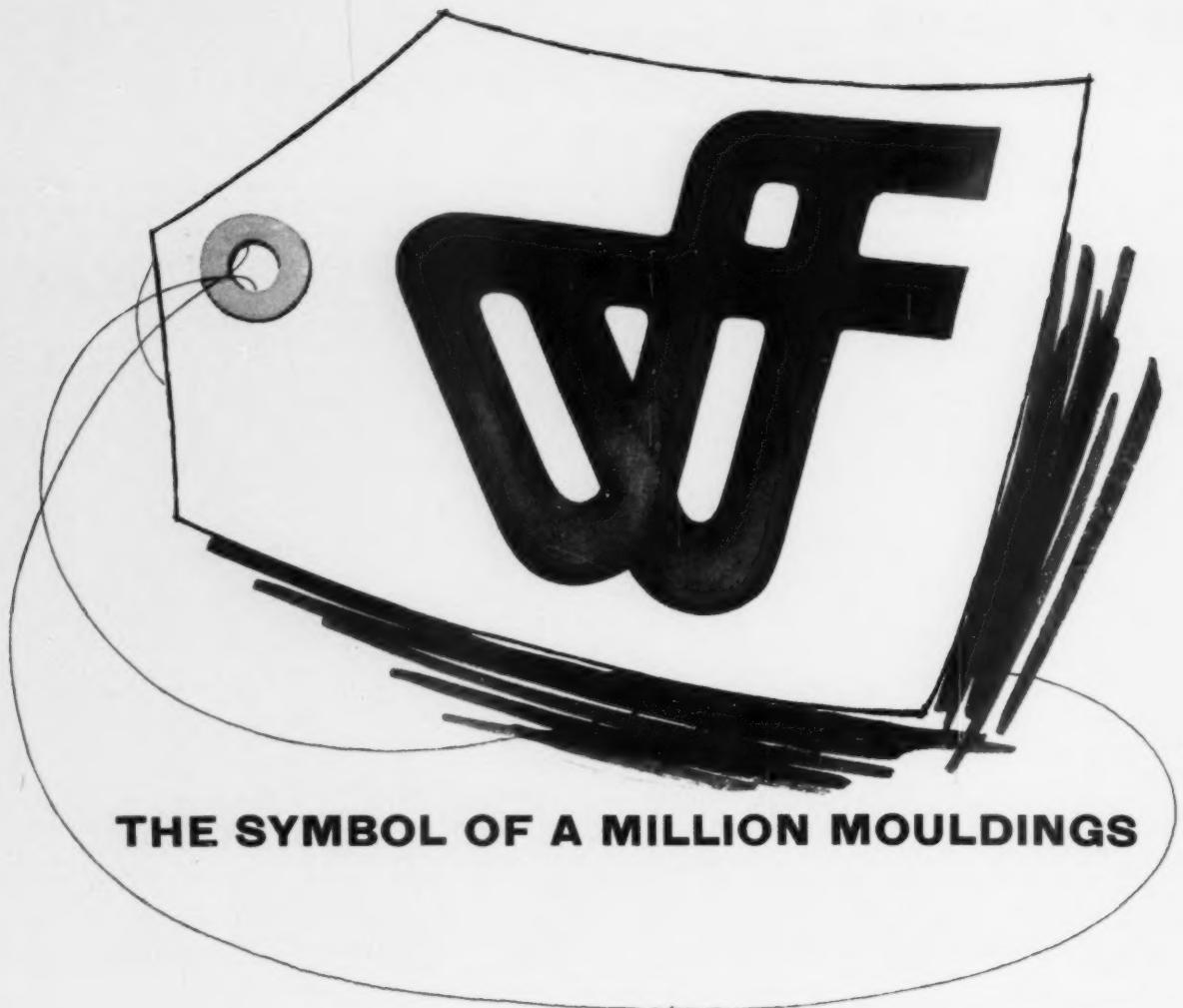
Of even greater interest are the higher (double sized) denominations of 1s and over. In each case a subject derived from a mass of photographic and other material has been distilled to its essential facts, and arranged in a composition which conveys atmosphere and feeling without being a slavish copy of a snapshot: the simplification of animals, vegetation and landscape is masterly, and Mr Goaman has been admirably served by Thomas De La Rue in the production of a series which is, in its way, as much a pioneer as was the Penny Black of 1840.

The present difficulties probably will not be resolved until there is a radical change of heart in the administrative staffs of some of the commissioning countries. Ever more competitive conditions demand better design if sales figures to collectors are to be maintained, let alone improved; but the striving after speed, colour and cheapness presents a difficulty. When sales are linked to topical events the time element dominates. But let us hope that the falling sales graph, if nothing else, will force issuing countries to seek better designed work as a matter of course rather than as the exception. EDGAR LEWY

approved'; the landscape, however, has been reduced to essentials and carefully composed. The lettering and large, clear, denominations are excellently formed. The design of the £1 value is particularly satisfying. The large-format engraved head surrounded by the shield-shaped border (a link element throughout the issue) is flanked

in the corners by the badge animals of Kenya (lion), Uganda (crane), and Tanganyika (giraffe), which also appear on the low values. The background is filled with simple horizontal or vertical shading to afford relief without interfering ornamentation, which is absent from the entire series. DESIGNER Michael Goaman. MAKER Thomas de la Rue & Co Ltd.





THE SYMBOL OF A MILLION MOULDINGS

There's a new symbol in Industry. It stands for Fibreform. Fibreform is more than a material: it is an exclusive process of moulding *reinforced fibrous plastics*.

You may have a project—present or future—where Fibreform mouldings are the answer to problems of weight—strength—visual appeal—cost—or any combination of these.

A Fibreform technical representative will always be pleased to discuss your needs—helpfully, informatively; and without obligation, of course. Please write or telephone.

Over 1 million large mouldings produced last year

Over 250 complex shapes—from bottle tops to table tops

The cheapest moulding for mass production

High impact resistance—excellent strength/weight ratio

Complex shapes and large areas no problem

Application of coloured and decorative finishes no problem

FIBREFORM

FIBROUS PLASTICS MOULDINGS



FIBRE FORM LIMITED

Garratt Mills Trewint Street Earlsfield London SW18 Telephone: Wimbledon 2386-7

MIDLAND WORKS

Lower Gornal Near Dudley Worcestershire Telephone: Sedgeley 2766-7

MISCELLANY



Paradise regained

Solicitors' storeroom into art gallery is the success story of a recent venture by the Council for the Encouragement of Music and Arts (CEMA) in Belfast. The new gallery, in Chichester Street at the city's centre, is in one of two Georgian houses; intimate scale and the textures and colours of natural materials are exploited to create a modern background for the paintings ABOVE.

Around the extremity, the walls have been sheeted and faced with coarse textured Tintawn matting in



a pebble-coloured quasi Donegal tweed design by Louis le Brocq, and the front wall and windows are concealed by a white painted, closely panelled screen which is pierced and glazed with a pattern of coloured glass in front of each window. A similar screen is repeated in the back wall which can be opened for access to the sculpture court. The 'island' walls are faced with concrete brick painted white with a number of brass screws built into the brick joints so that the pictures, lit by recessed spotlights

in the ceiling, may be hung in any position.

The sculpture court has been reconstructed from the back yard. Some of the walls and the new ceiling are faced with narrow pine boarding similar to that of the gallery, other walls are rough plastered and whitewashed, and the floor is of red sandstone flags which were on the site. Furniture includes Arne Jacobsen chairs and a Robin Day *Status* desk.

The architect was Robert McKinstry, and F. & W. Bell of Belfast was the main contractor.



The custodians

The Midland Region of the Society of Industrial Artists staged a small but significant exhibition of its members' work in Birmingham recently. There were about 30 exhibits shown either in photographs or in the round, including graphic designs, textiles, locomotives, exhibition stands and sports cars.

The man in the street, as well as readers of DESIGN, will be familiar with a good cross section of the designs on show, 1, so that the exhibition was a reminder, especially to the Metropolitan-orientated,

of the quality, as well as the quantity, that the Midlands can produce.

However, the display was primarily staged to convince the industrialist of the importance of the designers' role in British economy. Paul Reilly, director Coid, in a speech to open the exhibition, defined the designer as "the custodian of standards, the creator of markets, and the protector of the consumer" - but he added "only a minority recognise this twentieth century truism".



The standard and range of exhibits would no doubt help to drive this message home and the display was especially interesting in that it provided a preview of some new designs that will be on the market during the course of the year. Outstanding among these was the kettle, 2, designed by Robert Welch, and to be made by N. C. Joseph Ltd; this design was exhibited recently in the National Industrial Design Council of Canada's international selection of *Stainless Steel Design Awards*.

stripes are in...

The glowing beauty of Rivington Living Colour in stripes! That's "The New Line" by Rivington, the entirely new range of striped carpets with the brilliant contemporary appeal. Rivington NEW LINE comes in rich two-tone colour schemes in glorious Living Colours. The beautiful striped pattern is the latest, most successful creation of the famous Rivington Design Panel.

"The New Line" by Rivington is as practical as it is lovely. It has all the hard-wearing qualities that make Rivington Carpets so ideal for contract work. It is mothproof, and has exclusive Permapad backing to increase stability and improve handle of the cloth.

SEE THE RIVINGTON "NEW LINE" IN THESE LOVELY COLOURS

BURNT OAK Peat and black

WOOD GREEN Bay green and Greenstone

PARK ROYAL Monaco blue and Chinese turquoise

BOND STREET Chili red and cardinal red

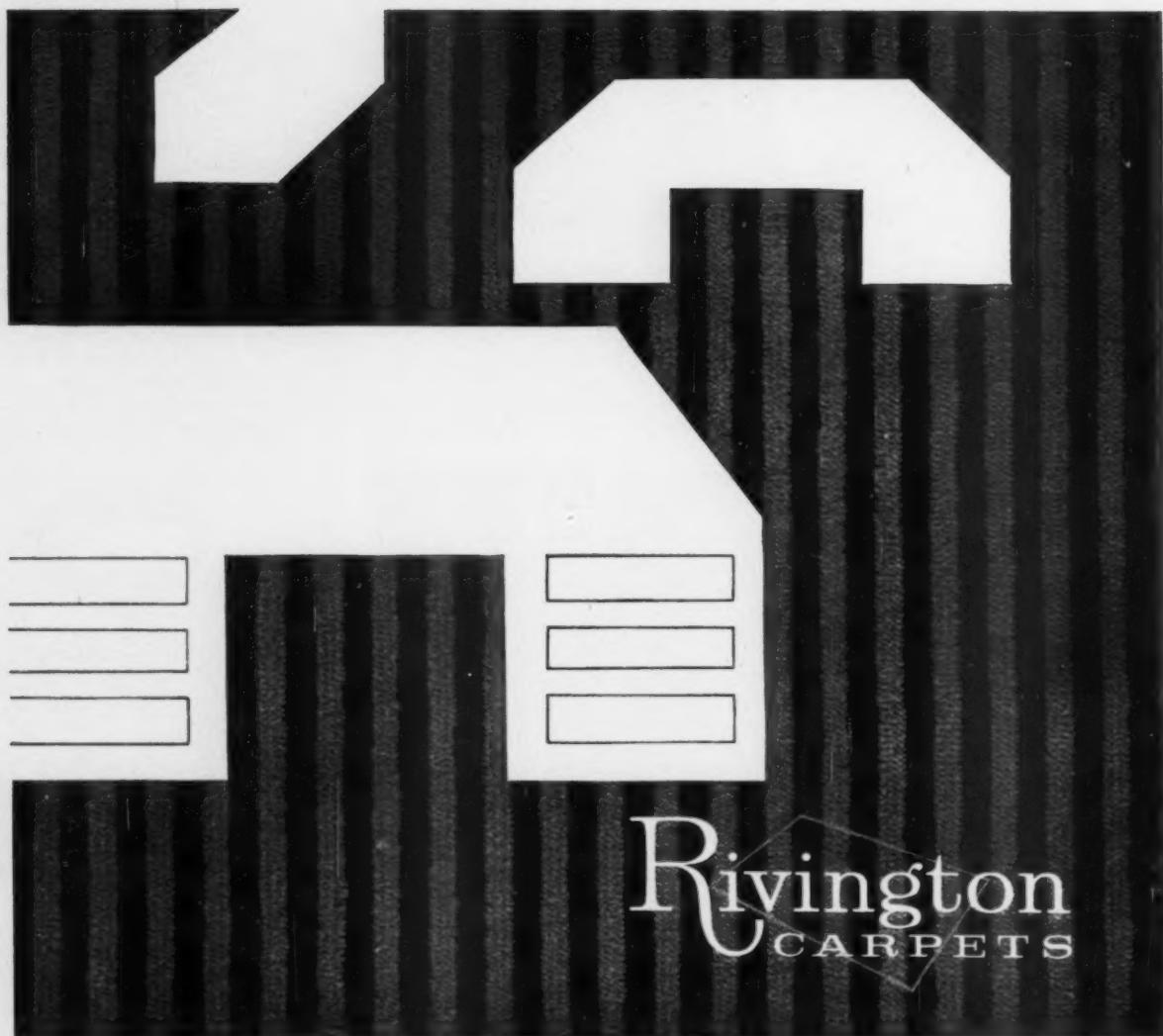
TEMPLE Grey mist and graphite

ANGEL Grey mist and Persian Lilac

85% VISCOSA RAYON AND 15% NYLON.

"The New Line" is available in all widths and retails at 59/6 per sq. yd.

in the NEW LINE by RIVINGTON



Retailers, Wholesalers, Architects and Contract users are invited to write for further information to:

RIVINGTON CARPETS LTD., London Office and Showrooms: 1 Clifford Street, Savile Row, W.I.

QUOTES

The tired typographer

Allan Fleming, type director, Cooper & Beatty Ltd of Canada, speaking to the Society of Typographic Designers on the theme In Defence of Typographic Vulgarity:

"... I'm going to take a hell of a slice at British ephemeral typographic design. Not book design, but design for the market place - letterheads, folders, advertisements, posters, announcements - in fact all the print that seems necessary in an industrial society.

"... British typographic design is too emasculated - too gentle - too tradition-oriented - and if it can be emasculated and incestuous at the same time then it's too incestuous. All any of you have to do is walk around your vibrant city with an objective eye in order to see how incongruous your design really is.

"... Ever since the Society of Typographic Designers asked me to speak (perhaps now to their deep regret), I've been trying to puzzle out the reasons for your myopic design. You certainly weren't like this in the early nineteenth century, or for that matter take a look at your lusty eighteenth century. Something happened along the way and I think if we go back a few years and retrace your 'typographic' steps then perhaps you may come to some of the conclusions I did.

"... British typographic design grew out of the Arts and Crafts Movement via the famous (and infamous) private presses, through Morison, Meynell and Simon. There were lots of other brilliant people along the way - like Gill and Warde and Newdigate, but basically that was your history up to the late 'thirties. This was a gradual establishment of a book tradition, and in no way was it concerned with publicity design.

"... And here, I feel, the British designer got completely 'hung up'. Much of your work is based on a completely false premise - that the reader is obviously captured and all you have to do is make the piece easy for him to read.

"... Now, I don't know if anything has happened recently to refute this - certainly neither the magazine *Motif* nor any of the British work other than Spencer's in *Typographica* can prove otherwise to me.

"... Legible, tasteful design is one thing, but getting the viewer to read is quite another. We have estimates from the researchers (and they are pretty frightening) that the average person in North America is exposed to over 1,200 commercial messages a day, and I'm sure you aren't far from this figure. That's 1,199 chances against your design being read.

THE VILLAINS

"Prior to the war it appeared that a man named Robert Harling was starting to point a way for the non-book designer. His magazines, *Typography*... and then much later *Alphabet and Image*... were largely pro-ephemeral publications. He recommended - or made a strong suit for - the vigour of nineteenth century design. There were articles on Fat face, nineteenth century rule-bending, and primarily he forced you to look at the controlled vulgarity of the jobbing printer.

"... So fine! We have a healthy and rude publication laying the foundations of what could have been a really dazzling set of designers when - all of

a sudden - along comes the villain of the piece: *The Festival of Britain Boom! Disaster!*

"... The F of B designers, taking a few leaves from Harling's magazines and blowing them up to a lectern Bible, started furiously producing Victoriana by the decorated mile. Back to 1851! - thank God someone designed Profile! - dust off the Antiques and Clarendons! I'm sure Stephenson Blake and Stevens Shanks were running around their mat libraries biting off the doorknobs. God, it was almost like a revival of buggy whips or racoon coats in North America. And no one stopped to realize.

"... Forget your ordered literature, forget the greatness of your typographic reformation, forget your careful training and start making some big, vulgar mistakes.

"... Remember that most of your audience have been living in a rude and vulgar age. They require more awareness on your part of their reading (or should I say interest) habits than the 15-word heading or the Aldus Manutius approach. And most important of all, remember that you are much more than arrangers of letterforms. You are journalists who must constantly keep in touch with the social patterns of your society. The types you use are only tools in the same way as the letters of the alphabet are to the journalists. Essentially the journalist is interested in people and how to reach them... That's your job too and you're not helping things by coiling yourselves around a typographic tradition instead of striking off into your society.

"... I honestly feel, once your groundwork has been laid, that you can learn more about typographic communication from jazz or a burlesque show or a tabloid newspaper than you'll ever learn from any amount of reading on the subject. I'm not saying that these standards are necessarily the ones you have to adopt permanently for yourself... but rather that you have the ability to adopt them AT WILL. In other words you must be a CONSCIOUS changing."

Mass media and the moralist

Richard Hamilton, speaking on Art and Design at a National Union of Teachers conference on Popular Culture and Personal Responsibility:

"... It seems to me that the philosophers and designers who laid the basis for the machine age aesthetic need, today, to have their tenets questioned. They may have been wrong, and I am not sure that they were not morally wrong at least when they reached such extremes as in this comparatively recent quotation from Lewis Mumford's *Art and Technics*: 'Once we have achieved the right form for a type object, it should keep that form for the next generation, or for the next thousand years. Indeed, we should be ready to accept further variations only when some radical advance in scientific knowledge or some radical change in the conditions of life has come about - changes that have nothing to do with the self-indulgent caprices of men or the pressure of the market. Then, and only then, does a modification of the type become imperative. Otherwise the ideal goal for the machine production is that of static perfection, a world of immobile platonic forms, as it

were a world of crystalline fixity, rather than continual change and flux'.

"... This cold expression of the death wish poses some difficult problems. How can we decide that the right form for type object has been achieved. I would say that Sir Herbert Read is as good a judge as anyone, but if we take a look at some of the illustrated examples in *Art and Industry* we might well be glad that the pressures of markets and the self-indulgent caprices of men have since brought a hundred variants of each type object shown. Some of these moreover, regardless of whether or not they satisfy the platonic yardstick, are a good deal easier to use and pleasanter to look at than the classic objects of the 'thirties.

"... If the standards of the design moralists become the standards of the masses it will be because the mass media have succeeded in presenting the imagery, if not the ideas, persuasively to the mass audience. Where the mass media depart from the moralists is in their refusal to accept the dogma of permanent values and in their efforts to welcome and promote the machine age with humour and affection. If some object survives from the past it does so because someone loves and respects the qualities embodied in it rather than because it attains some remote platonic standards".

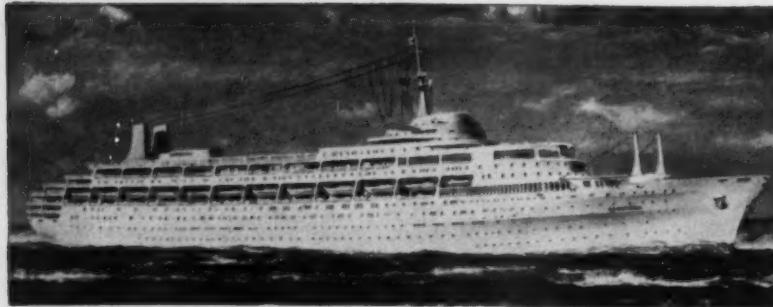
Carpet beating

Dr John Murray, vice-chairman of T. Bond Worth Ltd, speaking at the carpet conference organised by the CoID recently (DESIGN 145/69):

"... We in the carpet industry would do well to look to our laurels. We must begin to blaze a few trails as well as skate them. Or should I say we should be spry as well as constant? Our fading export performance marks us down as failures in this great new Elizabethan expansion. Perhaps our failure is not unconnected with the fact that the young and vital students in our design schools have written us off as a lot of squares - and who wants squares today?

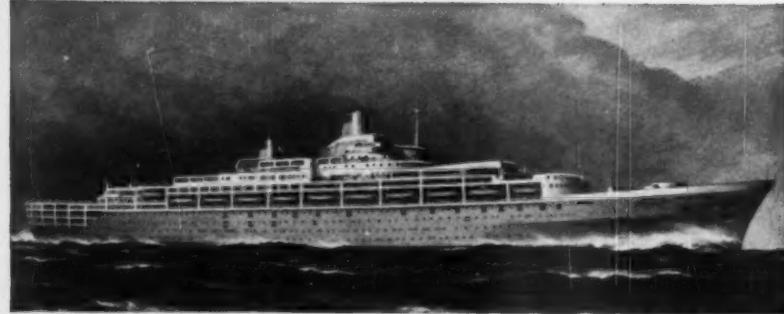
"... If we will attract young designers into partnership; if we will give our staff designers more scope for invention and development; if we will teach our salesmen that design is as important to them as beauty is to a woman; if we will encourage our directors to recognise that direction involves going somewhere; if above all we will accept the help and guidance of the CoID which, in spite of the small criticisms they so gallantly invited and got from me this evening, have during the past decade set us so courageously and imaginatively on the right road; if we will do these things then I foresee a future of unprecedented prosperity and expansion for our people.

"But if we neglect them, if we are content to browse like industrial dinosaurs in the familiar swamps of plagiarism and precedent, while the questing creative spirit of adventure with which our fathers built our industrial strength and commercial vitality drains insidiously away - then we shall not preserve our national standard of living any more than we shall preserve our national self-respect. It is time to get off our industrial backsides gentlemen. It is very much later than we think."



S.S.
CANBERRA

S.S.
ORIANA



Two new and massive links between
the peoples of the Commonwealth

**P&O
ORIENT
LINES**

16 COCKSPUR STREET SW1 · 130 LEADENHALL STREET EC3

PARIS

March 2nd to 19th 1961

Thursday the 2nd and Friday the 3rd of March
will be strictly reserved to professional
members of branches concerned

PALAIS DE LA DEFENSE

30° SALON INTERNATIONAL DES ARTS MENAGERS

30th International Arts of Home-Making Exhibition

For all information:

**Commissariat Général du Salon des Arts Ménagers:
Grand-Palais (Porte H) - PARIS 8°**



80,000 square metres of exhibition

1,800 exhibiting firms, including

270 foreign firms, representing

20 participating nations

Reports

DipAD

From 1963 DipAD (Diploma in Art and Design) will be the main design qualification in England (apart from the post graduate DesRCA). The NDD (National Diploma of Design) will cease to be awarded, and few will regret its departure. It has always lacked authority, and has had little recognition from industry. The recent report of the National Advisory Council on Art Education¹ (DESIGN 145/67) describes the new diploma, approximating in standard to a university degree, and sets out the changes in the structure of art school courses and examinations.

Briefly, the existing national examination (NDD), for which students are presented by some 106 art schools throughout the country, will disappear about the year 1963. In the meantime a new executive committee will have taken over from the Ministry of Education the responsibility for approving standards of courses and examination results. Examinations will be taken within a certain number of schools, each of which will have outside assessors.

One immediate effect will be a drastic reduction in the number of schools offering advanced courses. Official opinion has suggested that half or one-third might be approved for DipAD courses. Simultaneously, the number of departments in these schools would be reduced, as it is recommended there should be only four areas of specialisation. These four areas are: fine art, graphic design, three-dimensional design, and (together) textiles and fashion. Not all schools would necessarily have all four departments, although it would be rare for a school to have less than two.

THE CHANGES

From the student's point of view, the most obvious changes are the age of entry and academic requirements. No longer will students of 16 or 17 come straight to the art training school. The new age of entry for a diploma course is 18, and this should ensure a more mature student, although paradoxically the pre-diploma course which all students must have completed before starting the diploma course could mean a drop in academic standards – at present a number of sixth form boys and girls come straight on to art school at 18. To many students, however (and to a regrettably large number of art schools), the report's recommendation that, as a general rule, students should have at least five GCE (O level) passes (or an equivalent in terms of combined O and A levels) will come as a great shock. There is, however, a loophole in the report – the really gifted student (and each school is its own judge) is still eligible for admission to the course without this academic qualification.

From the point of view of design education, these changes are a major advance, although of course much will depend on the attitude of the executive council and the schools administering the examinations. Generally speaking, the DipAD graduate should be more mature, better educated, and have a good general background on which his specialised knowledge is based. He should be ready to take his place in the team, and on occasion to become its leader. The CoID has for years been advocating a higher general standard of education for designers.

Several aspects of the problem, however, have only

been touched on, or have not been fully covered in the report. Although a pre-diploma year is recommended, its content has only been sketched in, and it is not clear, for example, whether it will take place in the school issuing the diploma or in a 'non-diploma' school. This leads inevitably to a consideration of the place and status of the non-diploma schools in art training, and a further report on these is promised. The present report suggests the development of various other fields of activity, including part-time and non-vocational courses, and it also suggests that these schools should co-operate with the CoID in organising courses "related in a practical and imaginative way to the needs of industry and commerce". (The CoID has, for years, organised courses for the retail trade, and has more recently started courses for engineering personnel.)

Finally, the report considers that the question of industrial design (engineering) – or product design – is "a special problem", and consideration of the training required is deferred until the next report.

All in all, the report represents not one but several steps forward. The National Advisory Council is to be congratulated on the unanimity and the relative speed with which it has succeeded in rationalising this emotional and prejudice-ridden subject.

SYDNEY FOOTE

¹ Ministry of Education First Report of the National Advisory Council on Art Education, 1960, H M S O, 1s 6d.

Machine tool industry

The Melman report on the machine tool industry in Western Europe was published in 1959² and its main recommendation was that Western machine tool industries should adopt mass production methods. A sub-committee of the Machine Tool Advisory Council was then appointed to examine these proposals thoroughly and to report its findings.

This report,³ published recently, firmly rejects the mass production approach, although it qualifies this rejection by suggesting that batch production methods could be improved. Many of Professor Seymour Melman's other recommendations were also found to have limited value. However the report is by no means a defensive document, for it also deals frankly with such problems as the industry's inability to respond quickly to rises in demand, over-long delivery dates, and reluctance to meet special needs. In addition, it restates what everyone has said for so long, that not enough is spent on research and development, and that the industry badly needs qualified technical personnel. Our future markets, according to this report, lie in providing more complex tools, and this makes technical development imperative if the industry is to improve.

At the same time as this report was published the DSIR and the Machine Tool Trades Association issued a statement describing plans for building up this badly needed technical potential. The statement covered the establishment of a research association and the extension of training in machine tool technology. These practical proposals are not original, and their adequacy can be questioned. Nevertheless, although a modest beginning has been made, and

the right target – technical development – is being aimed at, it would be a pity to limit the value of technical improvement by failing to co-ordinate other design aspects with it. Technical development will bring new problems of control, and new machines which need clear visual delineation if they are to be used efficiently. The sub-committee's report might well have touched on these problems, for machine tool makers are coming to be more aware of such design factors; but then no other report has discussed them either.

W. H. MAYALL

² Report on the Productivity of Operations in the Machine Tool Industry in Western Europe, prepared by Professor Seymour Melman, Associate Professor of Industrial Engineering, Columbia University, for the European Productivity Agency.

³ The Machine Tool Industry, a report by the sub-committee of the Machine Tool Advisory Council, 1960, H M S O, 2s.

Hotels and the tourist industry

Nowhere else does the visitor to Britain get such a close insight into British design as in his hotel. Here he experiences good or bad design in a way that he will remember and recount at home.

Of the £153 million spent last year by tourists in this country, over £100 million was spent on hotels. And these figures will increase if hotel building and improvement keep pace with the demand.

But it is not doing so at the moment, as the British Travel and Holidays Association points out in its annual report. The matter is not only serious in terms of revenue, for it is vital that this unique shop window for British design is not allowed to lapse. We should have no doubt about the gravity of the matter – the airlines are already afraid that in a few years they will be able to carry more people than there will be rooms for when they arrive. Everything possible should be done to increase and improve hotel accommodation.

Copies of the report are available, price 2s 6d from the BTHA, Queen's House, 64 St James's Street, London SW9.

Interior architecture

The interior designer has suffered seriously in the past through lack of any respected association to which he could belong, and by which he could be backed with a recognised scale of charges, methods of working, and (important) letters after his name.

There are now two such bodies: the Society of Industrial Artists and the Incorporated Institute of British Decorators and Interior Designers. Membership of the SIA follows approval of work actually carried out, the standard of work required being both high and progressive. The IIBDID, with the full panoply of intermediate and final examinations, has been depressingly unreal, tending to see interior design as a selection of styles and applied ornament.

Signs that IIBDID's attitude is changing, are shown by the current regulations and descriptive booklet, *Interior Decoration and Design as a Career*, available from the institute, 37 Soho Square, W1. These still relate far more to the decorator than the interior architect, but the booklet provides hope that there will be increasing change, for it is the latter who is badly needed today.

STEPHEN GARRETT



Mates work better....

with modern Office Furniture!

Mates work better together in an office that's uncluttered. Clean, well-designed furniture puts new life into everyone, from top to bottom. In each office, you want streamlined efficiency, plus an atmosphere quiet enough for a game of chess! Why not consult Perrings. They have the answer to every problem.

THE CONTRACT DIVISION OF

JOHN PERRING

TIMELESS TREND 13 BROMPTON ROAD KNIGHTSBRIDGE S.W.3

DESIGN
QUALITY
VALUE

Phone: KNightsbridge 9388 - 9159

Furnishing Stores throughout Southern England

NEWS

APPOINTMENT

Antony Armstrong-Jones

Antony Armstrong-Jones has accepted an invitation from the Council of Industrial Design to assist in its work. The chairman of the Council, Sir Duncan Oppenheim, has informed Mr Armstrong-Jones how much the Council welcomes his interest. The idea that Mr Armstrong-Jones should take an active part in the work of the CoID was his own and arises out of his personal interest in architecture and design.

Mr Armstrong-Jones, who joined the staff last month, is assisting the Council in an advisory capacity and will devote a substantial amount of his time to its activities. His experience will be of particular value in connection with the CoID's educational and exhibition programmes, such as visual teaching aids, illustrated publications and displays.

OBITUARY

Walter Dorwin Teague

Those who started designing for industry in the 'twenties will realise what a tough job faced Walter Dorwin Teague, who died early in December. There was no specialised training for the new profession; few people had any idea of the necessity for it, and the designer had to create his market as he went along. But Teague had indispensable qualifications — imagination and perseverance — and he became one of the best known and best loved American designers.

Born in 1883, the son of a minister of Irish descent, in a small town, Decatur, in Indiana, he had very



Walter Dorwin Teague

little financial backing when his ability to draw encouraged him to go from Pendleton High School to the Art Students' League in New York for four years. After that he did illustrations for books and magazines and then joined an advertising firm. In 1926 he set up as an industrial design consultant on his own account, having secured work from Eastman Kodak and Boeing.

The Wall Street crash in 1929 broke many firms but it gave a great fillip to industrial designers, who were able to show that an improvement in appearance was a valuable sales asset. And Teague did just that. It brought him into touch with internationally known firms — Edison, National Cash Register, US Steel, Du Pont among others. He was a thorough and competent designer who liked to analyse the problem and could explain his solution with conviction. His design for the 1931 Marmon 16 did much to tidy up motor car design of the day and pointed a road which the industry might well have followed. His practice soon extended into exhibition

design, and in 1940 he published *Design This Day*, which was issued over here by The Studio Ltd in 1946. His account of the industrial designer's problems in the early formative period is full of interest.

The great respect and affection in which Teague was held by his colleagues made it seem inevitable that he should become the first president of the American Society of Industrial Designers; his invaluable support of this society was acknowledged by a special award for distinguished services to the profession in 1957. He was also president of the American Institute of Graphic Arts. In 1951 he was appointed an honorary member of the Faculty of Royal Designers for Industry by the Royal Society of Arts. In 1959 he read a paper on *The Growth and Scope of Industrial Design in the United States* to the Society and his visit is fresh in the memory of his many friends in England, by whom he will be greatly missed. On this occasion he was accompanied by his charming wife who, with two sons and a daughter, survive him.

GORDON RUSSELL

LECTURES

Ten years after

Sir Gerald Barry is to lecture on *The influence of the Festival of Britain on design today* at the Royal Society of Arts, 6 John Adam St, London, WC2. The lecture is to be held at 2.30 pm on February 15.

New patrons

J. Noel White, deputy director CoID, is to lecture on *The Critical Consumer: a New Patron*. The lecture, under the auspices of the Council of Scientific Management in the Home, will be held in the Portland Hall, Little Titchfield Street, London, W1, at 2.30 pm on February 22.

COMPETITIONS

Boost for handouts

The RIBA and the Building Centre are joint sponsors of a competition to raise the standard of

Designer's award

This year the Society of Industrial Artists' annual medal "for outstanding achievement in commercial or industrial design" was awarded to Abram Games (DESIGN 145/71). He is seen here, left, receiving the medal from Sir Gordon Russell at a recent ceremony at the Royal Society of Arts, when Jacquetta Hawkes gave the Design Oration.



Miss Independence

Nigeria's Miss Independence 1960, Rosemary Nkemasi-Okoko Anieze of Ibadan is seen here in The Design Centre during her recent tour of this country.

manufacturers' trade and technical literature, and to encourage firms to produce trade literature to the A4 international paper size. (See *Builders in Step*, page 71). The jury of architects nominated by the RIBA, will be George Grenfell Baines, Bruce Martin, R. T. Walters and Bryan Westwood.

The competition is open to literature, other than space and prestige advertising, which is directed to the architect.

Closing date for the receipt of entries is April 15. Further details are available from the director, Building Centre, 26 Store Street, London, WC1.

Ministry awards

The Minister of Housing and Local Government is holding a new series of competitions under the general title *Awards for Good Design in Housing*. The series, to be held in collaboration with the RIBA, is intended to encourage a high standard of design and layout in both urban and rural housing schemes. Any group or groups of at least 10 new dwellings on one site, completed between December 31, 1955 and December 31, 1960, are eligible for entry.

The closing date is February 28; further details are available from the Secretary, *Awards for Good Design Competition*, Ministry of Housing and Local Government, Whitehall, London, SW1.

EXHIBITIONS

At home . . .

International Refrigeration and Air Conditioning Exhibition, Earls Court, April 11-14.

International Automatic Vending Machine Exhibition, Royal Horticultural Society's New Hall, May 15-19.

International Hospital Equipment and Medical Services Exhibition, Olympia, May 15-20.

International Photo Fair, Olympia, May 29-June 3.

International Construction Equipment Exhibition, Crystal Palace, June 15-24.

. . . and abroad

United States World Trade Fair, New York, May 3-13 (apply Trade Fairs and Promotions Ltd, Drury House, Russell Street, London, WC2).

International Trade Fair, Paris, May 18-29 (French Chamber of Commerce, 74 Brook St, London, W1).

Industrial Fair, Budapest, May 19-29 (Hungarian

continued on page 71

du-al



P. 185



HB. 255



S. 186



AY. 257

METAL FURNITURE

in tapered tube!



UL. 258

Du-al metal furniture is styled for appearance and comfort combined with sturdy construction, finish and durability.

Du-al have the answer to all your seating problems.

DARE-INGLIS PRODUCTS LIMITED

Du-al House • Byron Road • Harrow • Middlesex

Telephone: HARrow 5141*

Telegrams: DU-AL, HARROW

Chamber of Commerce, Rosenberg hpu 17, Budapest V).

International Fair, Luxembourg, May 25-June 4 (Auger & Turner Group Ltd, Thorn House, Upper St Martin's Lane, London, WC2).

International Trade Fair, Barcelona, June 1-20 (Spanish Tourist Service, 93 Piccadilly, London, W1).

Ideal themes

The *Daily Mail Ideal Home Exhibition* will be held at Olympia from March 7-April 3. James Gardner is designing the centre-piece for the exhibition, a spectacular display of fountains.

CoID in Vancouver

The Board of Trade is to stage a display of British consumer goods at the *British Columbia International Trade Fair* in Vancouver on May 3-13; the CoID has been invited to select a range of goods from 'Design Index' to go on the official stand. Knitwear, clothing and sports goods will also be on show.

MISCELLANEOUS

Builders in step

The Association of Building Industry Distributors, supported by the RIBA, is urging its members to join the scheme for standardising the paper sizes of leaflets, publicity material, etc. The association suggests that international paper size A4 would be the most suitable one for manufacturers in the building industry to adopt.

Birmingham centre forward

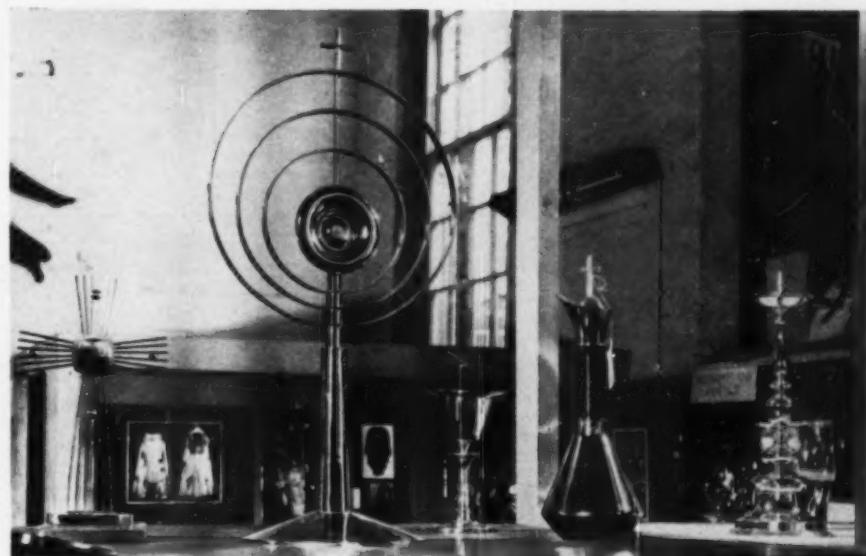
A committee has been formed to establish a Building Centre in Birmingham. It will be affiliated to the London Building Centre, and will work in conjunction with the Engineering Centre which is already well established in Birmingham.

Gold from California

Two designs by British manufacturers won gold medals at the *California State Fair* recently. These

Prize in proportion

A view of The Design Centre window with the golden compasses on display. This international award was presented to the CoID by La Rinascente, the Italian department



The modern church

This altar furniture was on display at the Bluecoat Display Centre in Liverpool recently. It formed part of an exhibition called *Furnishing the Modern Church*, which showed some of the work that artists, craftsmen and industrial

were awarded to the Irish linen glass cloths designed by Lucienne Day and made by Thomas Somerset & Co Ltd, which won a 1960 *Design Centre Award* (DESIGN 138/46), and the pewter martini pitcher designed by Gerald Benney and made by Viners Ltd (DESIGN 122/39).

New year honours

This year the New Year honours lists included:

KBE: Sir Arthur Morse, who has recently retired as chairman, British Travel and Holidays Association.
CBE: G. A. Jellicoe, landscape architect; F. S. John-

son, chairman and joint managing director, Johnson Bros (Hanley) Ltd; Roland Penrose, chairman, Institute of Contemporary Arts; A. R. Plowman, director of contracts, Ministry of Works.
OBE: William Wilson, artist in stained glass.

LETTERS

Presenting carpets

Sir: May I compliment you on the excellent article on carpets (DESIGN 143/42-57).

The photographs are quite extraordinary. They are almost the best I have seen, and incidentally should sell the particular items, for which the manufacturers ought to be grateful. The approach and style are quite fresh in carpet presentation.

The feature was altogether a most interesting production.

ROBERT ANDERSON
Assistant Chief Designer
James Templeton & Co Ltd
Templeton Street
Glasgow

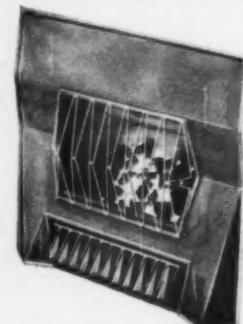
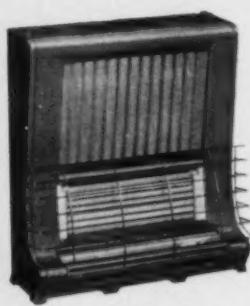
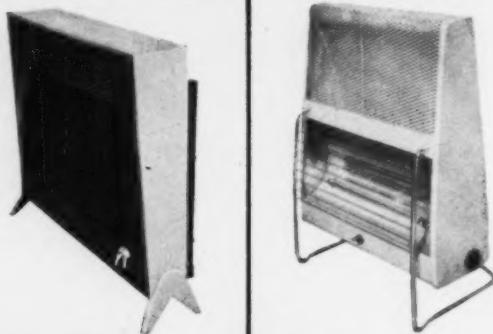
Mouth cleaning

SIR: I thought the article on *Mouth Cleaning Devices* (DESIGN 139/24-33) very stimulating, and I would consider that its objective, namely the investigation of a method of approach with regard to the design of an industrial project, has been well achieved. I have, however, noted down one or two statements on which I would like to comment.

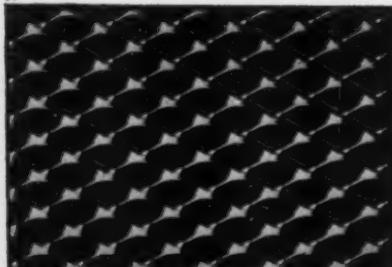
It is quite true that the public preference is in
continued on page 73



LOOK AROUND YOU...

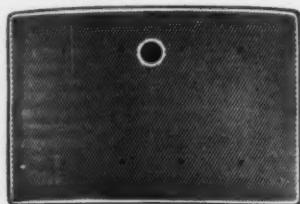


you'll see more manufacturers of heating appliances use Expanded Metal than any other alternative grill... and for many good reasons...



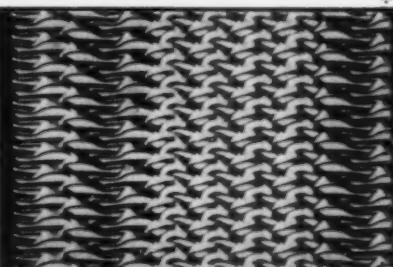
BETTER CONDUCTION

Expanded Metal, completely jointless, in steel or aluminium conducts evenly — allows uniform airflow. Ridged or flattened, there's a mesh for every application.



FASTER PRODUCTION

Expanded Metal is easily pre-punched and formed. Its introduction simplifies fabrication and speeds output. Special sizes can be cut and supplied in quantity.



WIDER CHOICE

Expanded Metal offers the strength and economy of steel or the colours and patterns of anodised aluminium. It opens up new opportunities for styling and sales.

Write for full details today



EXPANDED METAL

at the heart of more things than most people realise

THE EXPANDED METAL CO. LTD., 16 Caxton Street, London, S.W.1. Phone: ABBey 7766.
Also at: Aberdeen · Belfast · Birmingham · Cardiff · Dublin · Exeter · Glasgow · Leeds · Manchester · West Hartlepool.
The Expanded Metal Company of Canada Limited, Annacis Industrial Estate, Vancouver, Canada. Agents and Stockists throughout the free world.



general for too hard a brush. The abrasive properties of the toothpaste obviously play an important part, but an incorrect technique with a heavy hand over a long period of time with too hard a brush is tremendously important.

The blood circulation in the periodontal tissues usually is defective as a result of tartar (calculus) which causes chronic inflammation. The stimulation of the circulation by any form of massage is rather secondary, and the important thing is the primary elimination of the causal irritant.

The electric brush which I have seen, but not tried out clinically for any length of time, would seem to be a distinct advance; but presumably the price will keep it out of the range of many.

The suggestion of using some form of rubber or bristle pad incorporating a mouth spray is a good one; it is, of course, not new. It has many obvious advantages and a few serious disadvantages.

I am sure that this article will be of the greatest interest to the dental profession.

CONSULTING DENTAL SURGEON
(Name and address supplied)

More about mouth cleaning

SIR: I would like to put forward a few points in connection with your article *Mouth Cleaning Devices*. I thought that the cover of the magazine was imaginative and sophisticated, although the design suggested represented too complicated an approach to tooth cleansing.

I found the introduction to the feature very interesting; it posed the important question: is the toothbrush the best tool for the job?

The clinical requirements were well set out, although I disagree with the concept that the patient can do little to prevent the accumulation of tartar. A patient well trained in oral hygiene can markedly reduce the amount of calculus which would form if

he did not keep his mouth clean.

Of the new designs suggested, the cheap dispensable brush containing paste seems very promising. The electric brush is interesting, but I would prefer a design working on a small dc battery.

The chewing device is also a very good idea, providing it is used prophylactically. I can visualise considerable damage to the periodontal tissues if such a device is used when periodontal pockets are present.

However, I see no future for the spray and stimulator design.

On the whole I think you should be congratulated on a competent paper which should receive a wide circulation and be used as a basis for discussion, particularly by people working in the field of preventive dentistry.

G. L. ROBERTS
School of Dental Surgery
The University
Sheffield 10

Gracious living

SIR: I recently purchased a Tricity *Viscount* electric cooker because I consider it to be one of the neatest and most satisfactory designs on the market. I am shocked to see that an object calling itself the *Diner-cold* has now emerged from the same stable.

Brushing aside the snob-appeal advertising copy – "... (it) adds new grace to your home!" "... ideal for families whose level of living now demands a second fridge" – one confronts the horror itself.

I could almost manage the "gleaming sapele veneer" until I came to open the doors. Doors, you note, because to most mortals two handles mean two doors; but in this case you will be disappointed as in the good old fashioned way there is one door hinged on the right hand side. You are in actual fact meant to open it by a concealed finger hold at the side.

The depressing thing is that it will probably sell



The Tricity Diner-cold (see *Gracious Living*).

very well. I hope The Design Centre will turn all Tricity products out into the streets as a punishment for this retrograde step.

ROBIN D. BUTTERELL
42 Charlotte Street
London w1

BOOKS

Postzegelkunst

Christiaan de Mijor, *Netherlands Postal Administration, 's-Gravenhage, Netherlands*

One of the first major works on stamp design certainly deserves attention in its own right. It is also a book with considerable merits, and one of the author's more interesting efforts is his serious attempt to relate the development of stamp design for the Netherlands PTT administration with contemporary trends in art.

Until 1920, Dutch stamps were mostly haphazard efforts, concocted by the civil service in co-operation with a printer (Enschedé of Haarlem), and largely devoid of any artistic merit. In 1920 the Director-General of Posts decided on a thorough-going reform, which was not of course limited to postage stamps but included every other visual aspect of the PTT organisation. Postage stamps, owing to their wide distribution, naturally were accorded considerable importance, and following the general competition of 1920 (which produced some decidedly odd entries), a number of artists were commissioned to do stamp design work. In this development, the printer took his share of credit, and experts like S. L. Hartz, the late Jan van Krimpen, and S. H. de Roos are only a few of the distinguished names which come to mind.

This development, and the co-operation between
continued on page 75

In the van

This refrigerated van was built for Danish Frosted Foods Ltd by Danish Bacon Co (Industries) Ltd. The house style,

which is used on most of the firm's products, was designed by Jorgen Oksen, of Denmark.





in-uses-illimitable,
remarkable



...a basic material for a limitless variety of uses. Light in weight, shock resistant, non-absorbent, dimensionally stable and mechanically tough, RALSIN is a polyamide to which designers are daily giving new, highly functional, immensely advantageous forms—as mouldings, as extrusions, as machined components and as a protective coating.

Terminal blocks and gear trains, coil formers, thread guides, bushes and bearings, bottles, brushes and baskets, shoes and heel tips, tubes for a variety of purposes and food packs—all these and innumerable more are at their best in RALSIN.

Informative publications are freely available on Ralsin. Let us know your particular interests.



WHIFFENS

A member of the Fisons Group of Companies

Willows Works • Derby Road • Loughborough • Leicestershire
Telephone: Loughborough 3141

Whiffen & Sons Ltd. are the sole agents for Ralsin in the United Kingdom, Canada, Australia and New Zealand. Distribution outside the United Kingdom through Fisons Chemicals (Export) Ltd.

W78

the Netherlands art world and the postal administration continues (after a war-time *interregnum*) to this day, and on reading this book one is naturally tempted to draw comparisons with conditions in the UK. The book is furnished with English and French summaries of the Dutch text to facilitate study, but they only reinforce the thesis that it is one man with executive power and great appreciation of style who has initiated a movement and established a tradition for others to emulate. In a sense, Frank Pick's work for London Transport bears comparison.

There is much here for all postal administrations to study. The users of stamps – insofar as they are at all aware of the quality of the product sold across the post office counter – should rightly be told how much effort goes into the creation of a square inch of paper which can easily be criticised, but improved only with great difficulty. The author, late artistic adviser to the Netherlands PTT Administration, has helped our understanding of the many problems, and their often successful solutions. EDGAR LEWY

Shop equipment annual and directory

Westbourne Publications Ltd, £1 15s

The designer is beginning to dominate the salesman. Today attractive packaging, coupled with powerful presentation, has to sell the goods, frequently without the aid of a salesman. Thus the modern shopkeeper has to rely more and more on his fixtures and fittings.

The *Shop Equipment Annual and Directory* shows that he is well provided for – perhaps too well – as there is much duplication of similar equipment, especially in the field of self-service. The directory would still be a most useful publication if it only listed what is on the market and where to get it, but this publication goes further, as it also attempts to review what is available.

A directory must have a clear layout: unfortunately this is not the case with the one in question. The advertisements, instead of being grouped at the end of each section, or of the directory itself, are so closely interspersed with the copy that they merge with it, and in some cases even share the same block. This destroys the clarity and ease of reference.

In addition, the space allocated to each item appears to depend on the depth of the advertiser's purse, rather than on its relative importance. Many of the descriptions are so glowing, that they could well have been written by the manufacturer or his advertising agents. The shopkeeper, especially the small one who cannot afford to field test the equipment, would welcome a critical appraisal, describing concisely each item and what it does. And a tabular summary at the end of each section would be helpful to enable direct comparison to be made.

There must inevitably be weaknesses in a comprehensive directory attempting to cover such a wide field. In particular more space should be devoted to lighting, as this must be regarded from the outset as an integral and major part of all shopfitting. There is no mention of the superb and costly examples of cabinet work represented by the standard ranges of counters and fixtures provided by the leading firms of shopfitters. At the other end of the scale, there should be more information for the

'do-it-yourself' shopfitter who cannot afford, or may not even need, these beautiful and expensive pieces of shop furniture.

The directory suffers from the commendable fault of being over-ambitious. In attempting both to classify and to describe it becomes rambling, untidy, and unbalanced in its selection and description of equipment. Greater attention to detail would make this publication more useful to the shopkeeper, and more valuable to the advertiser. DAVID KEDDIE

Kontur 9

Editor, Margit Svedberg, Swedish Society for Industrial Design, Alec Tiranti Ltd, 11s

Once a year, the Swedish Society for Industrial Design produces a design miscellany in English, a 'cultural export' to stimulate fresh interest in Swedish skill and taste. *Kontur 9* starts off with a nostalgia prod – island summer, smell of pitchpine, rocks, ozone, angelica – then conjures us to look at selected aspects of Swedish artistry, with splendid photographs and naive text.

Items include the Swedish wooden summer house – there is a specially interesting one designed by Erik Ahlsén and built for himself (no plan); new Swedish embassies in New Delhi and Tokyo; the new Berling type face by Karl Erik Forberg; Sven Markelius' Trade Union Centre, with close up colour detail of an exciting sand-cast ceramic tile wall relief by Anders Lilje fors and Signe Persson-Melin; and a very classical-modern wooden house by Carl Nyren (no plan, exasperating). There is an Old Folks' House (brilliant picture of old lady in Carl Malmsten chair, photo Lennart Olsson). "Oldsters", as they are called in the article, are allowed all their own furniture, if they have any, except the bed (LCC please note). I was interested in the selection of modern jewellery – Torun Bülow-Hübe's subtle sculptural silverwork particularly appeals to me – but the text of this article is worse than whimsy. I feel rather mad about this Swedish cheesecake: even two honest upholstered chairs by Kerstin Horlin Holmquist cannot get by without Eve, the Apple, swans, river, and a character in a striped jersey monkeying about in the long grass – the whole in colour. This, like our tourist travel beefeating-gracious-lord-of-manor stuff, is cultural export disease. Now we know something about Sweden from Ingmar Bergman, surely the editor of *Kontur* could dispense with 'embroidering hollyhocks on the tea-cosies'. What I mean is that the furniture, the plastics buckets, the birch root baskets are first class; could not the text be more straightforward, more honest? PATIENCE GRAY

The kitchen

Joan E. Waller, Constable & Co, £1 10s

This is a comprehensive text-book on the kitchen, written by an expert and bulging with facts, figures and references. It covers kitchen history (prehistoric to 1960), fundamentals of heating and refrigeration, floors, motion study, planning and storage. It is about everything, and for everyone: teacher, student, architect, manufacturer, housewife, husband.

It is bound to be a valuable book for teachers and students; and everyone concerned with kitchens can

find useful information here for the looking. Specially interesting for the lay reader are the chapters on motion study, kitchen planning and storage. But the text-book language and lay-out, and the few disappointing illustrations, huddled out of context in the middle of the book, make the search for advice a ponderous one.

DOROTHY MEADE

London: the unique city

Steen Eiler Rasmussen, Penguin Books, 5s

Steen Eiler Rasmussen's book, originally written in 1934, is a general survey of the evolution of London and of the factors, aesthetic and sociological, that have governed its character and shape; factors such as the habit of piecemeal planning which is as prevalent today as it was during the sixteenth and seventeenth centuries. The unfortunate thing is that Dr Rasmussen, despite his apparent second thoughts in a postscript written in June 1960, tacitly endorses urban sprawl and the more unwholesome traditions of speculative building. As a history book it is interesting, as a pointer to solving some of the problems of today it is of little value.

Addenda

DESIGN 143/89: Ivor Kamish designed the sample box of *Dorset* tiles, but not the tiles themselves.

DESIGN 145/71: the dining/kitchen shown on the CoID stand at the *Furniture Show* was designed by Gillian Howell.

DESIGNERS in this issue

Alan Bednall; Gerald Benney, DESRCA; Louise Brocq; Arthur Brown; Lucienne Day, ARCA, FRA; Robin Day, RDI, ARCA, FRA; Eileen Doh, MHA; A. R. B. Dow, MHA; John Drummond, MHA; Aidron Duckworth, DESRCA; Abram Games, OBE, RDI, FRA; Michael Goaman, FRA; Kenneth Grange, FRA; John F. Hildred; A. G. Imber; Eric J. Marshall, FRA; David Ogle, MBE, DESRCA, MHA; I. J. Pickering; Peter Ray, FRA; Erich Rosenthal; Kenneth Skelton; Robert Welch, DESRCA, MHA; R. Stennett-Willson, MHA.

MANUFACTURERS in this issue

Aladdin Industries Ltd, Aladdin Building, Greenford, Middx
Allied Ironfounders Ltd, Grahams Rd, Falkirk, Stirlingshire
British Heat Resisting Glass Co Ltd, Phoenix Works, Loxdale St, Bilton, Staffs
Thomas De La Rue & Co Ltd, De La Rue House, 84 Regent St, w1
Electrical Division of Radiation Ltd, 457 Moseley Rd, Birmingham 12
Falk, Stadelmann & Co Ltd, 91 Farringdon Rd, ec1
The General Electric Co Ltd, Magnet House, Kingsway, wc2
J. Goddard & Sons Ltd, Nelson St, Leicester
T. G. Green & Co Ltd, Church Gresley Potteries, Nr Burton-on-Trent
Hayes & Finch Ltd, 90 Vernon St, Liverpool 2
Holborn Metal Works Ltd, 334 Upper St, Islington, n1
Hull Traders Ltd, 7 Sedley Place, Oxford St, w1
N. C. Joseph Ltd, The Aluminium Works, Stratford-on-Avon
Kenwood Manufacturing (Woking) Ltd, Hipy St, Old Woking, Surrey
W. F. Knight & Co Ltd, Stanley Rd, Wellingborough
Pye Ltd, St Andrew's Rd, Cambridge
Thomas Somerset & Co Ltd, Hardcastle St, Belfast, Northern Ireland
Tansley Howard Ltd, 95 Kensal Rd, w10
Taylor, Law & Co Ltd, Tala Works, Rufford Rd, Stourbridge
Tintawn Ltd, 658 Ajax Avenue, Slough, Bucks
Viners Ltd, Bath St, Sheffield 1
J. Wippell & Co Ltd, 55 High St, Exeter

EASIER DRAWING AND PRESSING...



Photograph by courtesy of Lec Refrigeration Ltd

Another reason why industry is changing over to

DRAGONITE

ELECTRO-ZINC COATED SHEET STEEL

DRAGONITE is sheet steel which has been given a coating of pure zinc on both faces. It has a number of advantages over ordinary, uncoated sheet steel. During drawing and pressing operations, for instance, the surface properties of Dragonite are maintained. In fact, the fine-grained structure and natural ductility of pure zinc actually assist fabrication

by acting as a dry, solid lubricant.

This exceptional ductility of Dragonite cuts manufacturing costs because it makes longer press runs possible and lengthens tool life.

There are many more good reasons why you should be using Dragonite. For fuller details, please write for a copy of the *Dragonite Technical Handbook* to:

These are some of the industries in which Dragonite is being used extensively: Office Equipment; Elevators; Agricultural Equipment; Automobile Industry; Domestic Appliances, Radio Equipment, etc.



THE STEEL COMPANY OF WALES LIMITED

Sales Offices: United Kingdom—Abbey Works, Port Talbot, Glamorgan. Overseas—Margam House, 26 St. James's Square, London, S.W.1

Just published



Applied Sign Lettering



Variety of alphabets and materials for internal or external use.
Illuminated letters and box signs.
Literature on request.

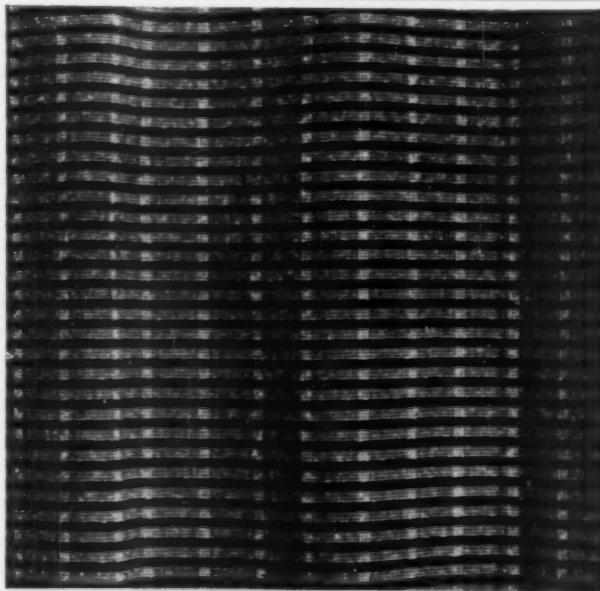
WARD & CO (letters) LTD.,
6-12 WILDER ST., BRISTOL 2 TEL 21536

30s

A practical handbook for designers new to free-lance work and design office management



B·A·T·S·F·O·R·D



219V 50" Modern weave in choice of eight colours



4541 50" Printed heavy Cotton Satin in various colourings

ROSEBANK *furnishing fabrics*

Made by TURNBULL & STOCKDALE LTD. RAMSBOTTOM, BURY, LANCS.
London Showrooms: Kent House, Market Place, Gt. Titchfield St., Oxford Circus, W.1.



Elegance and
strength right
down to the floor

Pel Taper Tube furniture has made a name for itself in hotels, restaurants, reception rooms and offices through good design and fitness for use in a work-a-day world. Wherever there is a need for furniture that can resist the rigours of daily use and keep its poise and elegance Pel Taper Tube will meet it, more than adequately and at no great cost. This range of furniture is *Pel* designed and *Pel* manufactured at the Oldbury factory. A colourful catalogue giving full details is available on request.



PEL
taper tube
furniture

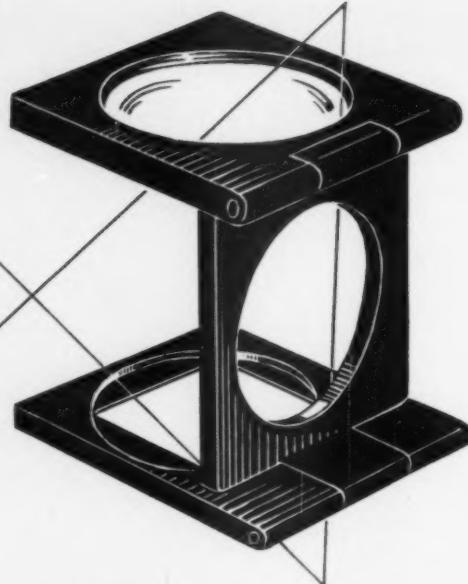
PEL LIMITED - A COMPANY - OLDBURY - BIRMINGHAM

TELEPHONE: BROADWELL 14016

LONDON SHOWROOMS: 15 HENRIETTA PLACE - W1 - TELEPHONE: WELBECK 1874
GLASGOW SHOWROOMS: 80 WELLINGTON STREET - C2 - TELEPHONE: CENTRAL 8886

TOW/DS

Fine Printing

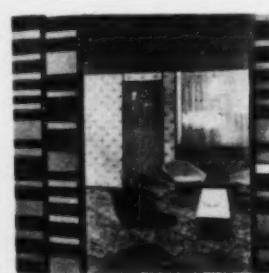


Colour Printers by precision Methods of Letterpress and Lithography, with a design service of outstanding merit, available for submission of ideas for Leaflets, Brochures, and Catalogues, specimens available from:

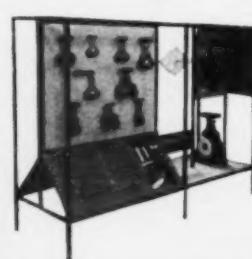
KINGS NORTON PRESS (1947) LTD.
Head Office and Factory, Kings Norton, Birmingham 30

Telephone No. KIN. 2262

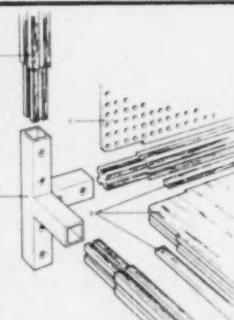
London Office: STUART HOUSE, 1 TUDOR STREET, LONDON E.C.4
Telephone No. Fleet Street 1379



ACKNOWLEDGMENTS TO THE WALLPAPER MANUFACTURERS LTD
panelling, screen dividers, furniture and displays



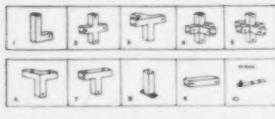
The neatest, most compact and rigid system of its kind in 5/8" sq. 7/8" sq. and 1 1/4" sq. Steel couplings and grooved joining members.



Rophic
Patents Pending

Modular Frame and Panel
Construction System

COUPLING UNITS IN 5/8" SECTION



write for leaflet and samples

TECHNIGRAPHIC BRISTOL LTD., CREWS HOLE ROAD, ST. GEORGE, BRISTOL 5 Tel. S1504



Architects, designers and builders are discovering with delight the advantages of ARBORITE, the high pressure plastic laminate which dominates the Canadian market and is already well known in more than 60 other countries. ARBORITE opens up for you the most lavish pattern-book of colours and subtle effects, and can provide exclusive inlays or silkscreened patterns to your own design. When it comes to the cladding of surfaces, you have in ARBORITE a tested material of unprecedented quality, in the greatest variety of sheet sizes, at standard prices, with a range of grades and planned accessories that can finish your work in a way that has not been possible before.

ARBORITE has long been specified and used in Canada by Government Departments, Crown Corporations, Hotels, Hospitals, Public and Municipal Buildings, Banks, Restaurants, Departmental Stores, Supermarkets, Ships, Public Transport, and of course in the Home, for furniture, wall and cupboard facings, doors and sills and countless other purposes.

85

COLOURS, PATTERNS AND EFFECTS
In a 'Color-Magic' range which includes wonderfully natural wood grains and cool classical marbles in high gloss and furniture finishes.

LEADERS IN POST-FORMING AND BENDING GRADES

making possible the cladding of attractive curved surfaces and rolled edges in any of the 85 patterns.

29 SHEET SIZES

to cut labour costs and wastage with sheets to suit the job. From 4' x 2' 6" right up to 12' x 5'. Standard 10' x 4' and 8' x 4'.

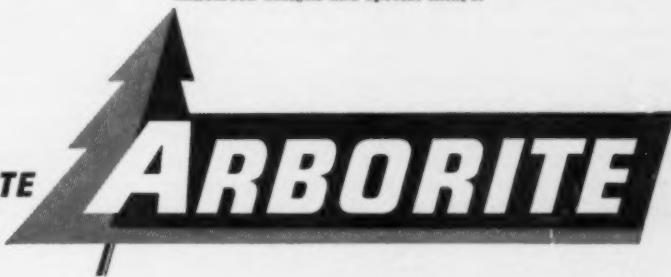
UNIQUE MATCHING EDGE TRIM AND TWIN-TRIM

for neater edges, corners and almost invisible joints.

INDIVIDUAL SERVICE

The ARBORITE art and technical services provides exclusive silkscreen designs and special inlays.

Face the future with
CANADA'S LEADING LAMINATE



Write for full information to: THE ARBORITE COMPANY (U.K.) LIMITED · BILTON HOUSE · 54-58 UXBRIDGE ROAD · EALING · LONDON W5 · TEL: EALING 0116
A subsidiary of The Arborite Company Limited of Montreal and Quebec, Toronto, Winnipeg and Vancouver.

TSW 8

*Line and half-tone
blocks in black and
white or colour*

*Advertisement
Typesetting*

*Stereotyping
•
Electrotyping*

LASCELLES

**TEMple Bar
4269**

**FLEet Street
2020**

GWYNNE HOUSE
15-17 ESSEX STREET
LONDON WC2

*Line and half-tone
blocks in black and
white or colour*

*Advertisement
Typesetting*

*Stereotyping
•
Electrotyping*

**A yawn like this . . .
adds to your
overheads!**

When a yawn like this engulfs a subordinate's face, you know you are paying good money for sleep-working. But don't blame your staff. Blame the seating. Bad seating sets up muscular strains, nerve tensions and harmful pressures on the respiratory and circulatory systems. The result: that familiar, not-quite-up-to-par feeling that slows down the works.

Sensible seating is good business. And TAN-SAD seating is sensible because it's scientific. Treat yourself and your staff to TAN-SAD seating and reap measurable rewards in greater output, livelier brains.

TAN-SAD



FREE—a booklet that tells you all about TAN-SAD scientific seating. Just attach this coupon to your signed letterhead and mail it to

TAN-SAD CHAIR CO. (1931) LTD
Lincoln House,
296/302 High Holborn, London WC1
Chancery 9231/7



British Broadcasting Corporation Television Centre



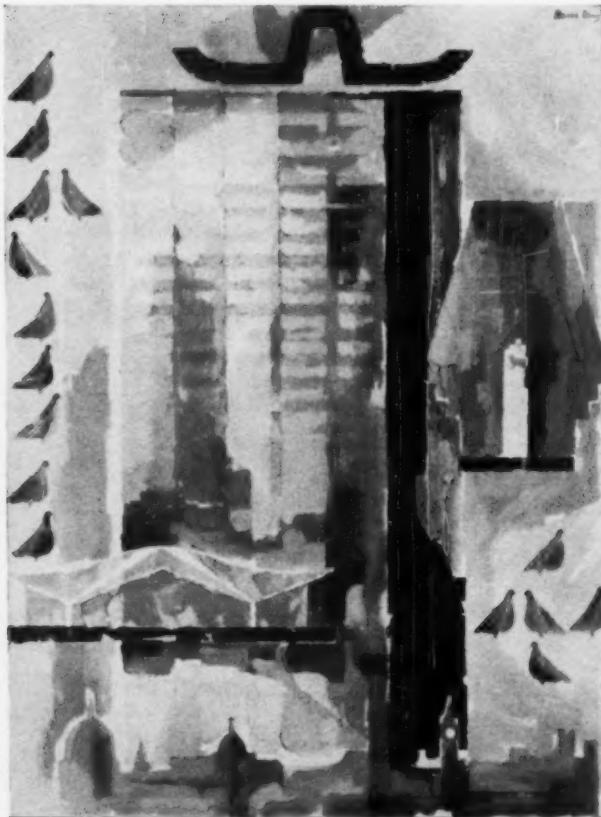
BY APPOINTMENT TO
H.M. QUEEN ELIZABETH II
UPHOLSTERERS & SUPPLIERS
OF FURNISHING MATERIALS

40' 0" long Boomerang
Shaped Conference
Table, 5' 0" wide on
centre line, tapering to
4' 2" at each end.
In Ebonised Walnut,
top lined Powder Blue
Leather. 33 Conference
Arm Chairs in Blue
Leather to match.

Architects:
Norman & Dawbarn
7 Portland Place
London, W.1

BERESFORD & HICKS
Curtain Road, London, E.C.2

* Enquiries for individual schemes in contemporary or traditional designs invited.



"Brave New London", a poster designed for London Transport by Hans Unger. It is one of the series of full colour prints of famous London Transport posters, which includes the work of Edward Bawden, R.A., John Minton, E. McKnight Kauffer, and many others. The average size of the prints is 6" x 5". They can be obtained, price 1s. each (postage 3d.) from the Publicity Officer, London Transport, Griffith House, 280 Marylebone Road, London, N.W.1.



THE **NEW** AND REVOLUTIONARY SIGNWRITING SYSTEM
THAT TOOK EUROPE
BY STORM!



Neoprint

Now available in Great Britain. A light portable printing system that will produce quickly and easily showcards, notices, display and price tickets, in three beautiful types with a full range of sizes.

Neoprint means a new
high standard of
legibility and elegance
and will quickly
pay for itself by the
money it saves.
Write for illustrated
brochure now!

a
c
g
u

SOLE DISTRIBUTORS OF NEOPRINT FOR THE U.K.

POLLARDS

E. POLLARD & CO. LTD.
29 Clerkenwell Rd., London, E.C.1
Telephone: CLErkenwell 6701



BIRMINGHAM COLLEGE OF ART AND CRAFTS
SCHOOL OF EMBROIDERY AND TEXTILES

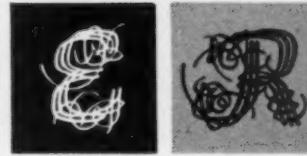
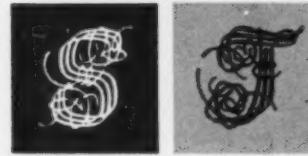
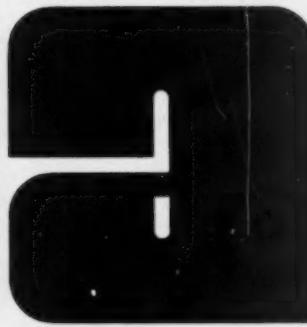
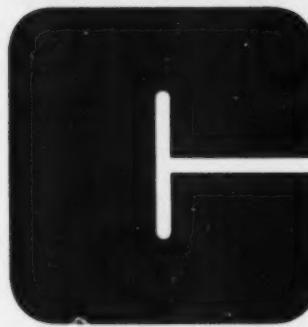
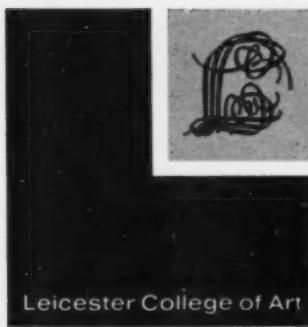
Advanced Courses in Design for
Hand and Machine Embroidery
Printed and Woven Textiles

is
your firm's name in
these pages?

£70 a page (and pro rata) will put you in touch with the discriminating manufacturer, distributor and commercial user who read DESIGN. Rate folder and circulation details from the Advertisement Manager, DESIGN, Council of Industrial Design, 28 Haymarket, SW1. TRAfalgar 8000



For further information regarding catalogues illustrating the best in British wood office furniture, write to the Secretaries, D2 Office, Appliance and Business Equipment Trades Association, 94-98 Petty France, London, S.W.1.

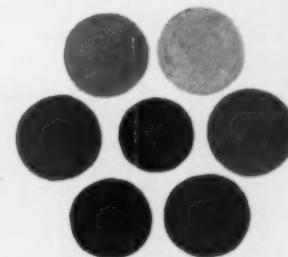


Design Fellowships

Regional College of Art Manchester

A number of post graduate or post diploma fellowships are offered for the session commencing September 1961. These fellowships at £500 each for advanced study in Graphic Design, Industrial Design, Textile Design, are tenable for one year in the first instance. The College will be particularly interested in applications for study for visual communications with particular reference to Packaging, Typography, Display and Photography. Application forms and further information from The Director, School of Advanced Studies, Regional College of Art, Manchester 15. Application forms to be returned by February 1961.

City of Manchester Education Committee



Cloth Colour Bank ©

Gayonnes Ltd. have the resources, the banking experience, and the stocks. We can supply quickly 10 yards, 10,000 yards or more of excellent cloth in the colours you want—always prudently priced.

Gaymod Strong Repp established 1931, Gaybel Satin since 1934,

Gaymod Rib 1946, Gaymod Mari 1959, Gaymod Yarn Dyed 1960.

Gayonnes Ltd., Colour Bankers © of dyed and woven cloth to the decorative trades.



Gayonnes Ltd., 22 Grafton St. (from Bond St. or Piccadilly) London, W.1.



CATALOGUES
MULTIPLE DISPLAYS . PACKAGING . BROCHURES
POSTERS . NOVEL CUT-OUTS
POINT OF SALE MEDIA



Classified advertisements

Rates: 1s 6d per word (minimum, 21s). Box numbers 1s extra. Copy: Last date for copy is 10th of month preceding date of issue

Situations vacant

THE COUNCIL OF INDUSTRIAL DESIGN requires a young Typographer with recognised training, to work with its exhibition designers. The starting salary will be according to qualifications, and experience if any, from £600 - £750 rising eventually to £985. There is 3½ weeks annual leave and a pension scheme. Please write for further details and application form to the Establishment Officer, 28 Haymarket, London sw1.

DESIGNER (senior) for electrical appliances needed by a Midland firm. Basic training must include light engineering production and a sound experience in drawing office work. A good standard of education in engineering technology is necessary. Please send full details of experience, education etc to Box No 483, Design, 28 Haymarket, London sw1.

ARCHITECT required by THM, industrial designers, to co-ordinate interior design projects. He must have had good commercial experience, be competent in running a drawing office and of liaison with clients. Age not under 30, good salary according to experience. Write to THM, 48 Dover Street, w1, giving details.

GABY SCHREIBER AND ASSOCIATES require experienced interior/industrial designer, with architectural training, able to prepare sketch schemes and working drawings. Apply in writing with full particulars to: 7 Hobart Place, London sw1.

JOHN AND SYLVIA REID require a Furniture and/or Product Designer or an architect wishing to enter this field for their varied practice. Applicants must be well qualified, be a good draughtsman, have a good educational background and be prepared to accept responsibility and hard work. There are good prospects for the right type of applicant. Please apply in handwriting only to 88 Talbot Road, N6, stating all relevant details and salary required.

DESIGNER, Ferguson Brothers, Limited, require a male designer, aged 25 - 35, to take charge of the colouring of their dress fabric roller print range. Art College training and several years' industrial experience (preferably in fashion goods) essential. A responsible position carrying an attractive starting salary, plus pension, and with prospects for advancement. Write, in confidence, giving particulars of experience and qualifications to: The Secretary, Ferguson Brothers, Limited, Holme Head Works, Carlisle.

DESIGN ASSISTANT required in James Gardner's office. Experience of general design and also the detailing and supervision of exhibition work. Some experience of graphic layout and typographical display desirable but not essential. Write stating experience and qualifications, to James Gardner, 13 Duke Street, Manchester Square, London w1.

DRAUGHTSMAN - exhibition and display - required by Sir William Crawford & Partners Ltd to prepare working drawings and specifications and supervise site work. A senior position offering excellent salary opportunities and prospects. Tel LANGHAM 4561.

Situations wanted

NEW ZEALAND is a good market in a shrinking world. Sales Manager seeks position with firm willing to manufacture N.Z. Write immediately for details. Box No 488, Design, 28 Haymarket, London sw1.

CONSULTANT DESIGNER, with production engineering background requires commissions with scope for creative effort. Interested in design and development projects with an engineering bias. Box No 485, Design, 28 Haymarket, London sw1.

DESIGNER, considerable experience decorative laminated plastics, also decorative design for ship or building interiors and graphic design for advertising and display, seeks change. Box No 486, Design, 28 Haymarket, London sw1.

QUALIFIED INTERIOR DESIGNER seeks contact with firm for purposes of part-time employment in London. Time available, evenings and weekends. Box No 484, Design, 28 Haymarket, London sw1.

Commissions and contracts wanted

COMMISSION & CONTRACTS WANTED. Graphic Designer/Typographer, MIA seeks commission or consultancy in Northern England and Border Areas. Box No 487, Design, 28 Haymarket, London sw1.

YOUNG DESIGNER, shops interiors, exhibitions, furniture, wishing to establish himself, requires commissions. Association with designer considered. Box No. 482, Design, 28 Haymarket, London sw1.

Miscellaneous

PICTURE FRAMING of all types undertaken. A large stock is maintained in London for immediate use and frames are made to specification without delay. Rowley, 86-87 Campden Street, Kensington, Church Street, w8. PARK 4349.

AEROFOAM can supply made-to-measure Dunlopillo latex foam seat panels covered in any material to fit on your frames - or loose cushions covered or uncovered - or just the Dunlopillo - or even just the advice - or bench seating anywhere. Aerofoam Ltd, 19-27 Cricklewood Bdy, NW2. GLA 9844.

Shipping and packing

INTENDING EXHIBITORS at European Fairs should contact Davies Turner & Co Ltd, 4 Lower Belgrave Street, London sw1, SLOANE 3455, for details of direct road service.

Prototypes and model making

FOR EXHIBITION STANDS and animated light displays, architectural and visual planning models, prototype design and development - consult: John Evans and Associates, East Gate House, Chenyne Walk, Northampton.

METAL-WIRE—TUBULAR WORK. Let us manufacture your prototypes and/or production runs. Holborn Metal Works Ltd. CAN 8042.

Printing and publications

TECHNICAL BULLETINS Advance Information Sheets, Data Sheets, Manuals, Part Lists, Price Lists, Illustrated Technical Reports, Diagrams. By direct image-litho, dia-litho and photo-litho up to size 19 inch x 13½ inch. Latest Typewriter Faces, Highest Quality, Speedy Service. Ask for Samples. Expedite Multiprint Limited, 51 Tothill Street, Westminster sw1. ABBEY 3213/4.

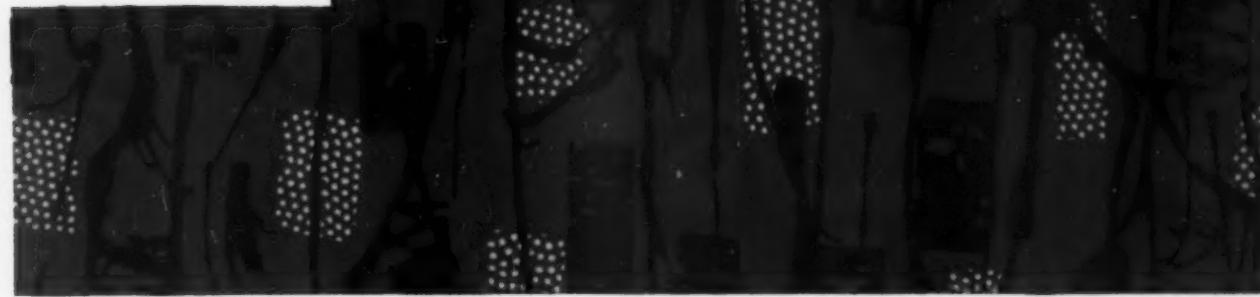
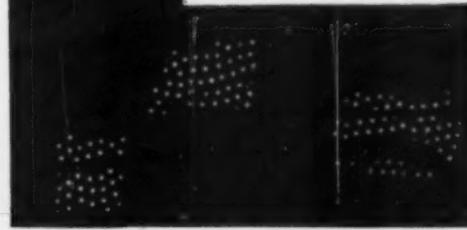
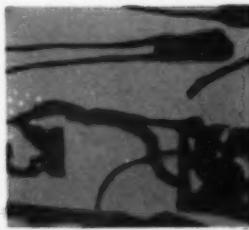
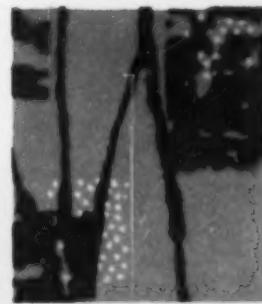
ISP OF HIGH WYCOMBE. Designers and printers of catalogues and brochures, have installed yet another letterpress printing machine to meet increasing demand. Head Office and Works, Publicity House, 93 West Wycombe Road, High Wycombe, Bucks. Telephone: High Wycombe 3341/2.

ADVERTISERS in this issue

Aircrow Co & Jicwood Ltd	..	..	..	..	..	4
Arboreto Co (UK) Ltd	..	..	..	..	..	79
Batsford, B. T., Ltd	..	..	..	..	..	77
Benham & Co Ltd	..	..	..	..	..	18
Beresford & Hicks Ltd	..	..	..	..	..	81
Birmingham College of Art	..	..	..	..	..	82
Bowaters Sales Co Ltd	..	..	..	..	..	8
Brooke & Adams Ltd	..	..	..	..	..	6
Cintique Chair Co	..	..	..	..	..	9
Cunlife, Mitzi	..	..	..	..	..	16
Dare Inglis Ltd	..	..	..	..	..	70
Edinburgh Weavers	..	..	..	..	..	20
Ercol Furniture	..	..	..	..	..	2
Expanded Metal Co Ltd	..	..	..	..	..	72
Fablon Ltd	..	..	..	..	..	12
Fibre Form Ltd	..	..	..	..	..	62
Firth-Vickers Stainless Steels Ltd	..	..	..	..	..	10
Formica Ltd	..	..	..	..	..	COVER III/14
Fray, Joseph, Ltd	..	..	..	..	..	13
Gayonnies Ltd	..	..	..	..	..	83
Harvey, G. A., (London) Ltd	..	..	..	..	..	7
Heffer, Allom & Co Ltd	..	..	..	..	..	60
Hille, S. & Co Ltd	..	..	..	..	..	24
ICI	..	..	..	..	..	COVER II/22
Kings Norton Press	..	..	..	..	..	78
Layton, C & E, Ltd	..	..	..	..	..	80
Leicester Colleges of Art & Technology	..	..	..	..	..	83
London Transport Executive	..	..	..	..	..	81
Lumenated Ceilings Ltd	..	..	..	..	..	15
Manchester Regional College of Art	..	..	..	..	..	83
Morris, Alfred Furnishing Ltd	..	..	..	..	..	1
OABETA	..	..	..	..	..	82
Paniquill (Sales) Ltd	..	..	..	..	..	18
P & O Orient Lines	..	..	..	..	..	66
Pel Ltd	..	..	..	..	..	78
Perring, John, (Contracts) Ltd	..	..	..	..	..	68
Pirelli Ltd	..	..	..	..	..	3
Pollard, E. & Co Ltd	..	..	..	..	..	82
Reeves & Sons Ltd	..	..	..	..	..	11
Rivington Carpets Ltd	..	..	..	..	..	64
Salon des Arts Menagers	..	..	..	..	..	66
Steel Co of Wales	..	..	..	..	..	76
Tan-Sad Chair Co Ltd	..	..	..	..	..	80
Technigraphic Bristol Ltd	..	..	..	..	..	78
Troughton & Young	..	..	..	..	..	19
Turnbull & Stockdale Ltd	..	..	..	..	..	77
United Ebonite & Lorival Ltd	..	..	..	..	..	COVER IV/
Walkers (Showcards) Ltd	..	..	..	..	..	83
Wall Paper Manufacturers Ltd	..	..	..	..	..	17
Ward & Co (Letters) Ltd	..	..	..	..	..	77
Whiffen & Sons Ltd	..	..	..	..	..	74
Winsor & Newton Ltd	..	..	..	..	..	5

MOONGRASS

One in the series of Formica bold patterns for the Architect and Designer, available to you on special order. Five colours: Green, Brown, Lavender, Red, Dark Grey.



FORMICA*

THE FINEST OF ALL THE DECORATIVE LAMINATES

*FORMICA is a registered trade mark.

Formica Ltd., De La Rue House, 84-86, Regent Street, London, W.1. *This reproduction may differ from the actual Formica colour pattern.

LORIVAL

For long-running
mass-production
plastic mouldings
in any material
it certainly pays
to 'leave it to Lorival'

LADS AT

LORIVAL-PLASTICS UNITED EBONITE & LORIVAL LTD LITTLE LEVER NR BOLTON LANCS

